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Building information models - Information delivery manual - Part 3: Data schema (ISO 29481-3:2022)

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This standard includes the English version of the European Standard.

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European foreword

This document (EN ISO 29481-3:2022) has been prepared by Technical Committee ISO/TC 59 "Buildings and civil engineering works" in collaboration with Technical Committee CEN/TC 442 “Building Information Modelling (BIM)” the secretariat of which is held by SN.

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Building information models — Information delivery manual —

Part 3: Data schema

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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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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 29481 series can be found on the ISO website.

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Introduction

This document specifies a machine applicable, readable and transferable (SMART) data schema for the efficient development, management and reuse of information delivery manual (IDM) specifications based on ISO 29481-1. ISO 29481-1 sets out a methodology for describing the processes and information requirements for a defined purpose within the development or management of an asset. In the absence of a standard data schema for exchanging and sharing the contents of IDMs in an electronic format, IDM specifications have historically been developed as either a static document file or as a data file specified in a proprietary data format. Consequently, their contents cannot be efficiently exchanged, shared and reused. The goal of this document is to define a standard data schema in order to expedite the development and sharing of the IDM specifications to meet the rapidly increasing demand for various building information modelling (BIM) use cases (UCs).

Using extensible markup language (XML), this document specifies a data schema for authoring, exchanging and sharing an IDM specification defined by ISO 29481-1. The data schema is referred to as the idmXML schema definition (idmXSD). idmXSD aims to allow users to electronically store, search, share, exchange and reuse IDM specifications and their contents, including metadata such as authors, dates, languages, revision history and supported project phases, as well as detailed descriptions of each information requirement. In addition, this document specifies the IDM code generation rules based on their key properties.

Use of this document will improve the interoperability of IDM specifications and their contents, providing tight digital links between the components of an IDM specification and to external data definitions such as ISO 16739-1 (industry foundation classes, IFC), ISO 12006-3, ISO 19650-1, ISO 23386, ISO 23387, EN 17412-1 (level of information need) and ISO 21597-1 (information container for linked document delivery), as well as model view definitions (MVDs) of standard data schemas.

INTERNATIONAL STANDARD **ISO 29481-3:2022(E)**

Building information models — Information delivery manual —

Part 3: Data schema

1 Scope

This document is the technical addition to the methodology set out in ISO 29481-1. It defines a specification to store, exchange and read information delivery manual (IDM) specifications in a standardized and machine-readable way.

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 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country code*

ISO 8601-1, *Date and time — Representations for information interchange — Part 1: Basic rules*

ISO 22263, *Organization of information about construction works — Framework for management of project information*

ISO 29481-1:2016, *Building information models — Information delivery manual — Part 1: Methodology and format*