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Graphic technology — Extensible metadata platform (XMP) —

Part 2: Description of XMP schemas using RELAX NG

Technologie graphique — Plate-forme de métadonnées extensibles (XMP) —

Partie 2: Description des schémas XMP utilisant RELAX NG

Reference number
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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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/130 *Graphic technology*.

ISO 16684 consists of the following parts, under the general title *Graphic technology — Extensible metadata platform (XMP)*:

— *Part 1: Data model, serialization, and core properties*

— *Part 2: Description of XMP schemas using RELAX NG*

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Introduction

ISO 16684 (all parts) defines aspects of the Extensible Metadata Platform (XMP) that are generic, neutral to the domain of usage. Refer to the Introduction in ISO 16684-1 for general information. This part of ISO 16684 is about description of XMP schemas for formal or mechanical validation of XMP. RELAX NG has been chosen as the schema language. It is an ISO standard, ISO/IEC 19757-2, and is both powerful and easy to use.

There are two major components of formal validation, schemas and validation engines. A schema, or schema file, is a formal description of constraints regarding the structure and contents of properties in an XMP packet, on top of the requirements for conforming XMP packets as mandated by ISO 16684-1. A validation engine is a software tool that compares an input XMP packet to one or more schemas, and produces a report on whether the XMP packet conforms to the schemas.

This part of ISO 16684 defines policies for validation engines to follow so that schemas can be shared, so that the schemas do not require customization for each validation engine. It also defines policies for schemas to follow in order to operate with a conforming validation engine, and to make the schemas robust and modular.

This part of ISO 16684 does not address how a validation engine reports success or failure. Reporting success is easy, reporting failure can be complicated by a number of factors.

— It can be difficult to relate a specific RDF usage error to a human-understood XMP data model.

— Recovery from one error can be difficult, masking other errors after the first.

— As an open model, creation of new data items in XMP is expected. Allowing for this in schemas and/or clear reporting of unexpected input when validating can be difficult.

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Graphic technology — Extensible metadata platform (XMP) —

Part 2: Description of XMP schemas using RELAX NG

1 Scope

This part of ISO 16684 specifies the use of RELAX NG to describe serialized XMP metadata. This applies to how conforming schemas can use the features of RELAX NG.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 16684-1:2012, *Graphic technology — Extensible metadata platform (XMP) specification — Part 1: Data model, serialization and core properties*

ISO/IEC 19757-2, *Information technology — Document Schema Definition Language (DSDL) — Part 2: Regular-grammar-based validation — RELAX NG*

3 Terms and definitions

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

3.1
canonical serialization
serialization providing a one-to-one mapping between the XMP data model and the serialized XML

3.2
general qualifier
XMP qualifier other than xml:lang

3.3
schema
schema file
formal description of serialized XMP

3.4
validation
process of verifying whether serialized XMP follows one or more schemas

3.5
validation engine
software tool that performs validation

3.6
XMP
extensible metadata platform, as defined by ISO 16684-1

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