Technical Report

# ISO/TR 29166

# Information technology — Document description and processing languages — Guidelines for translation between ISO/IEC 26300 and ISO/IEC 29500 document formats

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# Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 29166 was prepared by Joint Technical Committee ISO/IEC JTC 1, Information technology, Subcommittee SC 34, Document description and processing languages.

# Introduction

OASIS Open Document Format ODF 1.0 (ISO/IEC 26300:2006) and Office Open XML (ISO/IEC 29500) are both open document formats for saving and exchanging word processing documents, spreadsheets and presentations. Both formats are XML based but differ in design and scope.

The following abbreviations are used throughout this Technical Report:

— ODF, which stands for OpenDocument Format (ISO/IEC 26300:2006);

— OOXML, which stands for Office Open XML (ISO/IEC 29500:2008).

ISO/IEC 29500 is structured into four parts, each of which contains normative as well as informative material: Fundamentals and Markup Language Reference, Open Packaging Conventions, Markup Compatibility and Extensibility, and Transitional Migration Features.

At the time of writing (June 2011) the following corrigenda and amendments have been published:

— ISO/IEC 29500-1:2008/Cor.1:2010, ISO/IEC 29500-2:2008/Cor.1:2010, ISO/IEC 29500-3:2008/Cor.1:2010 and ISO/IEC 29500-4:2008/Cor.1:2010, containing minor technical corrections and editorial modifications;

— ISO/IEC 29500-1:2008/Amd.1:2010 and ISO/IEC 29500-4:2008/Amd.1:2010, containing namespace changes and modifications concerning the usage of percentage (%) values;

— ISO/IEC 29500:2011 (ECMA 376 3rd edition) as a consolidated version of OOXML containing the above-mentioned corrigenda and amendments;

— ISO/IEC 26300:2006/Cor.1:2010, containing editorial modifications;

— ISO/IEC 26300:2006/Cor.2:2011, fixing editorial errors.

In addition, the following Amendments are under preparation:

— Amendment 1 to ISO/IEC 29500-1:2011 and Amendment 1 to ISO/IEC 29500-4:2011 about ISO 8601 dates;

— Amendment 1 to ISO/IEC 26300:2006 introducing ODF 1.1.

# Information technology — Document description and processing languages — Guidelines for translation between ISO/IEC 26300 and ISO/IEC 29500 document formats

## 1 Scope

This Technical Report provides guidelines for translation between ISO/IEC 26300 and ISO/IEC 29500 document formats. It starts by studying common use cases to identify how the most important functionalities of one document format can be represented in the other format. This is followed by a thorough review of the concepts, architectures and various features of the two document formats in order to provide a good understanding of the commonalities and differences. It is expected that functionalities will be able to be translated with different degrees of fidelity to the other format. As an illustrative sample of this functionality, detailed information is provided on the extent to which those functionalities can be translated. This Technical Report is a necessary step to the goal of helping achieve interoperability and harmonization between the two formats.

## 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 26300:2006, *Information technology — Open Document Format for Office Applications (OpenDocument) v1.0*

ISO/IEC 29500-1:2008[1)], *Information technology — Document description and processing languages — Office Open XML File Formats*

ISO/IEC 29500-2:2008[2)], *Information technology — Document description and processing languages — Office Open XML File Formats*

ISO/IEC 29500-3:2008[3)], *Information technology — Document description and processing languages — Office Open XML File Formats*

ISO/IEC 29500-4:2008[4)], *Information technology — Document description and processing languages — Office Open XML File Formats*

ISO 5127, *Information and documentation — Foundation and vocabulary*

ISO 15924, *Information and documentation — Codes for the representation of names of scripts*

1) Cancelled and replaced by ISO/IEC 29500-1:2011.

2) Cancelled and replaced by ISO/IEC 29500-2:2011.

3) Cancelled and replaced by ISO/IEC 29500-3:2011.

4) Cancelled and replaced by ISO/IEC 29500-4:2011.

## 3 Terms and definitions

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

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org

**3.1**
**translation type**
methods used when translating between ODF and OOXML documents

Note 1 to entry: This Technical Report distinguishes four translation types: * one way ODF to OOXML translation; * one way OOXML to ODF translation; * round trip ODF to OOXML to ODF translation; * round trip OOXML to ODF to OOXML translation.

**3.2**
**translation fidelity**
quality of a translation process between the ODF and OOXML document formats

Note 1 to entry: Translation fidelity depends on document properties.

Note 2 to entry: Translation fidelity cannot be measured in an absolute manner; it depends on the intentions of the document's authors.

**3.3**
**document property**
description of different yet independent dimensions within the specification of a document

Note 1 to entry: As defined in 4.2 this Technical Report distinguishes the following document properties: * presentation instructions; * content; * dynamic content; * meta data; * annotations and security; * document parts.

Note 2 to entry: Document properties are implemented using document features.

### 3.4 General

**3.4.1**
**access**
right, opportunity, means of finding, using or retrieving information

[SOURCE: ISO 15489-1:2016, 3.1]

**3.4.2**
**asset**
anything that has value to the organization

Note 1 to entry: There can be many types of assets, including:

a) information (such as documents and databases);

b) software, such as a computer program;

c) physical, such as a computer;

d) services (meaning capabilities to deliver something);

e) people, and their qualifications, skills, and experience; and

f) intangibles, such as reputation and image.

[SOURCE: ISO/IEC 27000:2009, 2.3]

**3.4.3**
**record(s)**
information created, received and maintained as evidence and as an *asset* (3.4.2) by an organization or person, in pursuit of legal obligations or in the transaction of business

Note 1 to entry: The viewpoint defined in this document is intended to be useful in any enterprise architecture scenario, and intended to prevent conflicting meanings in multiple viewpoints. The term used in the ArchiMate modelling of this viewpoint is "business record". In this document the term "business record" has the same definition as the established definition for "record" in the records management domain.

[SOURCE: ISO 15489-1:2016, 3.14]

**3.4.4**
**records system**
information system which captures, manages and provides *access* (3.4.1) to **term `records`, display `record(s)` not resolved via ID `records`** through time

Note 1 to entry: In the context of records management, "system" means a business system that is responsible for automating business activities and transactions.

[SOURCE: ISO 15489-1:2016, 3.16, modified – In the definition, the word "over" has been replaced by "through" and Note 1 to entry has been replaced.]

# 4 Main content

## 4.1 General

Here's where you place your main content.

## 4.2 Data models

The following data models are used by other data models specified in this document.

### 4.2.1 Basic data types

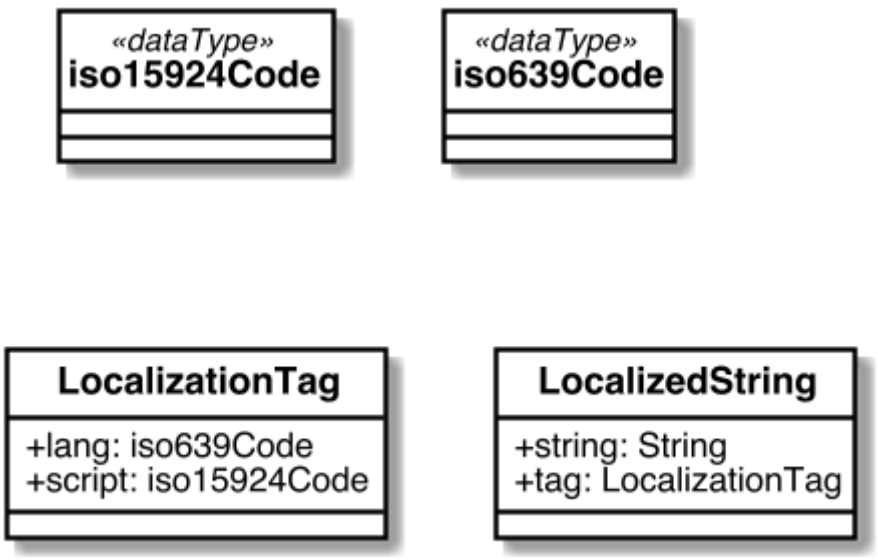


**Figure 1**

# Annex A
(normative)

# Annex One

This is a normative annex.

# Annex B
(informative)

# Annex Two

This is an informative annex.

# Bibliography

[1] ISO/IEC 10746-1:1998, *Information technology — Open Distributed Processing — Reference model: Overview*

[2] ISO/IEC 10746-3:1996[5)], *Information technology — Open Distributed Processing — Reference Model: Architecture*

[3] ISO 15489-1:2016, *Information and documentation — Records management — Part 1: Concepts and principles*

[4] ISO/IEC 27000:2009[6)], *Information technology — Security techniques — Information security management systems*

5) Cancelled and replaced by ISO/IEC 10746-3:2009.

6) Cancelled and replaced by ISO/IEC 27000:2012.

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