

INTERNATIONAL  
STANDARD

ISO  
19444-1

First edition  
2016-12-15

---

---

**Document management — XML Forms  
Data Format —**

**Part 1:  
Use of ISO 32000-2 (XFDF 3.0)**

*Gestion de documents — Format de Données des Formulaires XML —  
Partie 1: Utilisation de l'ISO 32000-2 (XFDF 3.0)*



Reference number  
ISO 19444-1:2016(E)

© ISO 2016



## COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
[copyright@iso.org](mailto:copyright@iso.org)  
[www.iso.org](http://www.iso.org)

# Contents

	Page
<b>Foreword</b>	<b>vi</b>
<b>Introduction</b>	<b>vii</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>1</b>
<b>4 Notation</b>	<b>1</b>
<b>5 Introduction to XFDF</b>	<b>1</b>
5.1 General	1
5.2 Forms data and annotations	1
5.3 How to use this specification	3
5.4 PDF, FDF and XFDF	3
5.4.1 General	3
5.4.2 Sample form in FDF and XFDF	5
5.4.3 Sample annotation in FDF and XFDF	6
5.5 Writing XFDF	7
5.5.1 General	7
5.5.2 Encoding and Namespace	7
5.6 Understanding forms	7
5.6.1 General	7
5.6.2 Simple XFDF form	7
5.6.3 Hierarchical XFDF form	8
5.7 Understanding annotations	9
5.7.1 General	9
5.7.2 Simple XFDF annotation	10
5.7.3 Annotation with popup text	11
5.7.4 Annotation with comment	11
5.8 Implementation notes	13
5.8.1 General	13
5.8.2 String encoding conventions	13
5.8.3 Rich text strings	13
5.8.4 XML content model syntax	14
<b>6 XFDF reference</b>	<b>15</b>
6.1 General	15
6.2 XFDF elements	15
6.2.1 Elements	15
6.2.2 xfdf	15
6.2.3 f	15
6.2.4 ids	16
6.3 Form field elements	16
6.3.1 Fields	16
6.3.2 Field	17
6.3.3 value	17
6.3.4 value-richtext	17
6.4 Annotation elements	18
6.4.1 annots	18
6.4.2 text	18
6.4.3 highlight	19
6.4.4 underline	20
6.4.5 strikeout	20
6.4.6 squiggly	21
6.4.7 line	22
6.4.8 circle	23

6.4.9	square.....	24
6.4.10	caret.....	25
6.4.11	polygon.....	26
6.4.12	polyline.....	27
6.4.13	stamp.....	28
6.4.14	ink.....	29
6.4.15	freetext.....	30
6.4.16	fileattachment.....	31
6.4.17	sound.....	32
6.4.18	link.....	33
6.4.19	redact.....	33
6.4.20	projection.....	34
6.5	Annotation sub-elements.....	35
6.5.1	Action.....	35
6.5.2	appearance.....	35
6.5.3	BorderStyleAlt.....	35
6.5.4	contents.....	36
6.5.5	contents-richtext.....	36
6.5.6	data.....	37
6.5.7	defaultappearance.....	37
6.5.8	defaultappearance.....	38
6.5.9	defaultstyle.....	38
6.5.10	Dest.....	38
6.5.11	File.....	39
6.5.12	gesture.....	39
6.5.13	Fit.....	39
6.5.14	FitB.....	40
6.5.15	FitBH.....	40
6.5.16	FitBV.....	41
6.5.17	FitH.....	41
6.5.18	FitR.....	41
6.5.19	FitV.....	42
6.5.20	GoTo.....	42
6.5.21	GoToR.....	43
6.5.22	inklist.....	43
6.5.23	Launch.....	43
6.5.24	Named.....	44
6.5.25	Named.....	44
6.5.26	OnActivation.....	44
6.5.27	overlayappearance.....	45
6.5.28	popup.....	45
6.5.29	resource.....	46
6.5.30	URI.....	46
6.5.31	vertices.....	47
6.5.32	XYZ.....	47
6.6	Annotation attributes.....	47
6.6.1	Overview.....	47
6.6.2	FDF annotation attributes.....	48
6.6.3	Common annotation attributes.....	48
6.6.4	Markup annotation attributes.....	49
6.6.5	Text markup annotation attributes.....	50
6.6.6	Text annotation attributes.....	51
6.6.7	Line annotation attributes.....	52
6.6.8	Circle and Square annotation attributes.....	54
6.6.9	Caret annotation attributes.....	55
6.6.10	Polygon and Polyline annotation attributes.....	56
6.6.11	Freetext annotation attributes.....	57
6.6.12	Stamp annotation attributes.....	58

6.6.13	Fileattachment annotation attributes .....	59
6.6.14	Sound annotation attributes.....	59
6.6.15	Popup annotation attributes .....	60
6.6.16	Link annotation attributes .....	60
6.6.17	Redaction annotation attributes .....	61
6.6.18	Border effect attributes.....	61
6.6.19	Border style attributes.....	62
6.6.20	Border array attributes.....	62
6.6.21	Embedded file parameter attributes.....	63
6.6.22	Stream attributes.....	63
6.6.23	File specification attributes.....	64
6.6.24	Destination syntax attributes .....	64
6.6.25	Remote go-to attributes.....	64
6.6.26	Launch attributes .....	64
6.6.27	Named action attributes.....	65
6.6.28	URI attributes .....	65
6.6.29	Mac OS file information attributes .....	65
6.6.30	Miscellaneous attributes.....	66
<b>Bibliography</b> .....	<b>67</b>	

## 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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 171, *Document management applications*, Subcommittee SC 2, *Document file formats, EDMS systems and authenticity of information*.

A list of all parts in the ISO 19444 series can be found on the ISO website.

## Introduction

This document describes the XML Forms Data Format, which is used to represent form data from PDF (ISO 32000-2) in an XML tagset.

This format is derived from the Forms Data Format in PDF and is intended to be a more interchangeable format for forms data.



# Document management — XML Forms Data Format —

## Part 1: Use of ISO 32000-2 (XFDF 3.0)

### 1 Scope

This document specifies an XML format for representing forms data and annotations in the Portable Document Format, ISO 32000-2 (PDF 2.0).

This document does not change or add any definitions for any components of ISO 32000-2.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 32000-2 apply.

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

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

### 4 Notation

All XFDF element names, XFDF attributes names and examples (XFDF and PDF) are written in fixed width font. All inline PDF and FDF operators, keywords and the names of keys in PDF dictionaries are written in bold font. All inline words that denote operands of PDF and FDF operators or values of PDF dictionary keys are written in italic sans serif font.

Ellipses (...) are used within XFDF examples to indicate omitted detail.

### 5 Introduction to XFDF

#### 5.1 General

XML Forms Data Format (XFDF) is a format for representing forms data and annotations in a PDF document. This specification describes XFDF compatible with ISO 32000-2. XFDF is the XML version of Forms Data Format (FDF), a simplified version of PDF for representing forms data and annotations.

#### 5.2 Forms data and annotations

Form fields in a PDF document may include many interactive elements (see ISO 32000-2:—, 12.7). [Figure 1](#) shows a sample PDF which utilizes edit boxes, buttons, and radio buttons: