

# SVENSK STANDARD

## SS-ISO 19445:2016



Fastställt/Approved: 2016-06-21  
Publicerad/Published: 2016-06-28  
Utgåva/Edition: 1  
Språk/Language: engelska/English  
ICS: 01.140.40; 35.240.30; 37.100.01

---

**Grafisk teknik – Metadata för grafiska arbetsflöden – XMP-  
metadata för bild- och dokumentkorrektur (ISO 19445:2016, IDT)**

**Graphic technology – Metadata for graphic arts workflow – XMP  
metadata for image and document proofing  
(ISO 19445:2016, IDT)**

This preview is downloaded from [www.sis.se](http://www.sis.se). Buy the entire standard via <https://www.sis.se/std-8021096>

# Standarder får världen att fungera

*SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.*

## Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

## Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

## Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

**Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på [www.sis.se](http://www.sis.se) eller ta kontakt med oss på tel 08-555 523 00.**



# Standards make the world go round

*SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.*

## Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

## Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

## Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

**If you want to know more about SIS, or how standards can streamline your organisation, please visit [www.sis.se](http://www.sis.se) or contact us on phone +46 (0)8-555 523 00**



Den internationella standarden ISO 19445:2016 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 19445:2016.

The International Standard ISO 19445:2016 has the status of a Swedish Standard. This document contains the official English version of ISO 19445:2016.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

*Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.*

*Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.*

Denna standard är framtagen av kommittén för Grafisk teknik, SIS/TK 434.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på [www.sis.se](http://www.sis.se) - där hittar du mer information.



<b>Contents</b>	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms, definitions and abbreviated terms</b> .....	<b>1</b>
3.1 Terms and definitions .....	1
3.2 Abbreviated terms .....	2
<b>4 Requirements</b> .....	<b>2</b>
4.1 General .....	2
4.2 Namespace .....	2
4.3 XMP packet structure .....	2
4.4 ImageApprovals property .....	2
4.5 ProofingApprovals property .....	3
4.6 ProofPrinter record .....	4
4.7 ProofingDevice record .....	5
<b>5 Soft-Proofing PDF specifications</b> .....	<b>6</b>
5.1 Encoding PDF/X output conditions .....	6
5.2 Using digital signatures .....	6
<b>Annex A (informative) XMP examples</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>9</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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

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

## Introduction

This International Standard describes a set of metadata that can be used to communicate the approval status for images or documents that are used for graphic arts print production workflow.

It is based on the soft-proofing ticket defined by the Ghent PDF Workgroup which uses XMP. This specification includes the specification of the Ghent PDF Workgroup soft-proofing ticket and extends it to include metadata required for the image preparation stage of the workflow.

The intent of this metadata is to track who has approved the image or document, how the proof was prepared, and what the viewing conditions were during the approval. To achieve this, the approver is identified along with the document output conditions, the software used for the approval and details of the device configuration.





# Graphic technology — Metadata for graphic arts workflow — XMP metadata for image and document proofing

## 1 Scope

This International Standard specifies the set of metadata to be used to communicate the approval status, proof preparation and viewing parameters for images and documents that are used in the graphic arts print production workflow.

## 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 15076-1, *Image technology colour management — Architecture, profile format and data structure — Part 1: Based on ICC.1:2010*

ISO 15930 (all parts), *Graphic technology — Prepress digital data exchange using PDF*

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

ISO 32000-1, *Document management — Portable document format — Part 1: PDF 1.7*

## 3 Terms, definitions and abbreviated terms

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

### 3.1 Terms and definitions

#### 3.1.1

##### **ICC CMYK characterization data registry**

central registry for CMYK print characterization data maintained by the ICC

#### 3.1.2

##### **ICC profile**

set of colorimetric transforms prepared in accordance with ICC.1 or ISO 15076-1

#### 3.1.3

##### **PDF/X**

file format for reliable exchange of print-ready data defined in ISO 15930

#### 3.1.4

##### **URI**

Uniform Resource Identifier as defined in IETF RFC 3986

#### 3.1.5

##### **XMP**

eXtensible Metadata Platform

standard format for the creation, processing, and interchange of metadata as defined by ISO 16684-1

## 3.2 Abbreviated terms

GWG	Ghent PDF Workgroup (see <a href="http://www.gwg.org">www.gwg.org</a> )
ICC	International Color Consortium (see <a href="http://www.color.org">www.color.org</a> )
URI	Uniform Resource Identifier
XMP	eXtensible Metadata Platform

## 4 Requirements

### 4.1 General

XMP shall be used to store information about the image and document preparation and approval and shall conform to the requirements of ISO 16684-1 and additional requirements as defined by this International Standard.

This metadata shall be added, as described in ISO 16684-1, as an XMP packet to the image or document to which it refers.

### 4.2 Namespace

The namespace URI for XMP properties and fields defined in this International Standard shall be "<http://gwg.org/spt/xmlns/>".

The preferred namespace prefix is **spt**.

### 4.3 XMP packet structure

An XMP packet conforming to this International Standard shall include either the ImageApprovals property or the ProofingApprovals property but not both. An XMP packet conforming to this International Standard may contain other XMP properties.

### 4.4 ImageApprovals property

The ImageApprovals property shall be a non-empty ordered array of ImageApproval records as specified in [Table 1](#).

The ImageApprovals record shall contain entries for all fields marked as *Required* and, where appropriate, should contain entries for those fields marked as *Optional*.

NOTE There is currently no defined purpose to the ImageApprovals order. An ordered array is used for compatibility with earlier GWG specifications.

The fields of the ImageApproval record are shown in [Table 1](#).

**Table 1 — ImageApproval record**

Name	Type	Field content
PrintingConditionIdentifier	open Choice of Text	<i>Required.</i> The reference name for the printing condition that was used when the image was approved.  This is an open choice - preferred options are those indicated in the ICC CMYK characterization data registry (see <a href="http://www.color.org">www.color.org</a> ).
PrintingConditionDescription	Text	<i>Required.</i> A non-empty human readable string that describes the printing condition.
PrintingConditionProfileID	Text	<i>Required.</i> The ICC profile ID of the printing condition profile used when the image was approved. Note that if the ICC profile ID was not set (i.e. is zero) the profile ID shall be calculated as described in ISO 15076-1 (ICC profile format specification).  The 16-byte ICC profile ID shall be expressed as a hexadecimal text string with dash separators between every 8 characters (4 bytes) making a total string length of 35 characters.
RenderingIntent	closed Choice of Text	<i>Required.</i> The rendering intent used when approving the image; closed choice of AbsoluteColorimetric, RelativeColorimetric, Perceptual or Saturation.  NOTE If using BlackPointCompensation as defined in ISO 18619, then RenderingIntent cannot be AbsoluteColorimetric.
BlackPointCompensation	Boolean	<i>Required.</i> Indicates whether BlackPoint Compensation was used when the image was approved. BlackPoint Compensation should be performed as described in ISO 18619.
ApproverName	ProperName	<i>Required.</i> A human readable name.
ApprovalDevice	closed Choice of Text	<i>Required.</i> Closed choice of Monitor or Printer.
ApprovalStatus	closed Choice of Text	<i>Required.</i> The status of approval; closed choice of Approved or Rejected.
ApprovalDate	Date	<i>Required.</i> The date and time of approval.
ProofPrinters	ordered array of ProofPrinter records	<i>Required when hard copy proofing is performed.</i> One or more ProofPrinter records defined in <a href="#">4.6</a> describing the hard copy proof.
ProofingDevices	ordered array of ProofingDevice records	<i>Required when soft proofing is performed.</i> One or more ProofingDevice records defined in <a href="#">4.7</a> describing the proofing device(s).

#### 4.5 ProofingApprovals property

The ProofingApprovals property shall be a non-empty ordered array of ProofingApproval records as specified in [Table 2](#).

The ProofingApprovals record shall contain entries for all fields marked as *Required* and, where appropriate, should contain entries for those fields marked as *Optional*. When writing the ProofingApprovals record entries for those fields indicated as *Deprecated* should not be used, fields marked in this way indicate past usage and are provided in this International Standard for information only.

NOTE There is currently no defined purpose to the ProofingApprovals order. An ordered array is used for compatibility with earlier GWG specifications.