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

*Technologie graphique — Métadonnées pour le flux de travail des
arts graphiques — Métadonnées XMP pour la relecture de document
et d'image*

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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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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*.

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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.

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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*

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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 www.gwg.org)
ICC	International Color Consortium (see www.color.org)
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 www.color.org).
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 4.6 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 4.7 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.