
**Information technology — Digital
compression and coding of continuous-
tone still images: Application to printing
systems**

*Technologies de l'information — Compression numérique et codage
des images fixes à modelé continu: Application aux systèmes
d'impression*



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2013

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
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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.

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 10918-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*, in collaboration with ITU-T. The identical text is published as Rec. ITU-T T.872 (06/2012).

ISO/IEC 10918 consists of the following parts, under the general title *Information technology -- Digital compression and coding of continuous-tone still images*:

- *Part 1: Requirements and guidelines*
- *Part 2: Compliance testing*
- *Part 3: Extensions*
- *Part 4: Registration of JPEG profiles, SPIFF profiles, SPIFF tags, SPIFF colour spaces, APPn markers, SPIFF compression types and Registration Authorities (REGAUT)*
- *Part 5: JPEG File Interchange Format (JFIF)*
- *Part 6: Application to printing systems*

CONTENTS

	<i>Page</i>
1 Scope	1
2 Normative references	1
3 Definitions	1
4 Abbreviations	2
5 Conformance	2
6 JPEG print-application support overview	2
6.1 Colour encodings and associated values to define white and black	2
6.2 Characterization of colour or grayscale values	3
6.3 Order of components for images encoded with three or four components	3
6.4 Start of Frame (SOF) markers	3
6.5 Application markers and marker segments	3
7 Conversions between colour encodings	4
Bibliography	5

Introduction

This Recommendation | International Standard specifies a subset of features and application tools for the interchange of images encoded according to the JPEG image coding standard (Rec. ITU-T T.81 | ISO/IEC 10918-1) for printing.

INTERNATIONAL STANDARD

RECOMMENDATION ITU-T

Information technology – Digital compression and coding of continuous-tone still images: Application to printing systems**1 Scope**

This Recommendation | International Standard specifies a subset of features and application tools for printing applications that encode or decode images based on JPEG (Recommendation ITU-T T.81 | ISO/IEC 10918-1) encoding. Its creation was proposed by members of the digital printing industry to ensure that applications developed for printing systems can exchange JPEG images.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

- Recommendation ITU-T T.81 (1992) | ISO/IEC 10918-1:1994, *Information technology – Digital compression and coding of continuous-tone still images – Requirements and guidelines*.
- Recommendation ITU-T T.871 (2011) | ISO/IEC 10918-5:2011, *Information technology – Digital compression and coding of continuous-tone still images – JPEG File Interchange Format (JFIF)*.
- Recommendation ITU-R BT.601-6 (2007), *Studio encoding parameters of digital television for standard 4:3 and wide screen 16:9 aspect ratios*.
- ISO 15076-1:2010, *Image technology colour management – Architecture, profile format and data structure – Part 1: Based on ICC.1:2004-10*.