

TECHNICAL SPECIFICATION

ISO/TS
12033

First edition
2001-11-15

Electronic imaging — Guidance for selection of document image compression methods

*Imagerie électronique — Guide pour la sélection des méthodes de
compression d'image*



Reference number
ISO/TS 12033:2001(E)

© ISO 2001

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2001

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing 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.ch
Web www.iso.ch

Printed in Switzerland

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General	3
5 Type of document and digitization parameters	3
5.1 General	3
5.2 Types of documents	3
5.3 Document classification and digitization	4
5.3.1 General	4
5.3.2 Black and white documents	4
5.3.3 Greyscale documents	4
5.3.4 Pseudo-grey documents	5
5.3.5 Colour documents	5
5.3.6 Mixed documents	5
6 Compression methods and standards	6
6.1 RLE compression (Run-Length Encoding)	6
6.2 LZW compression (Lempel-Ziv-Welch)	6
6.3 ITU-T algorithms	6
6.3.1 General	6
6.3.2 Group 3 one-dimensional method (G3 1D)	6
6.3.3 Group 3 two-dimensional method (G3 2D) and Group 4 method	7
6.4 JBIG compression	7
6.5 JPEG compression	7
6.5.1 General	7
6.5.2 Discrete Cosine Transform (DCT)	8
6.5.3 JPEG steps	8
6.5.4 Components of JPEG	8
6.6 Fractal compression	9
6.7 Wavelet compression	9
7 Selecting compression parameters	9
7.1 Pertinence of compression	9
7.2 Selecting a compression method	10
7.3 Adjusting JPEG compression	10
8 Conclusion	11
Bibliography	12