TECHNICAL REPORT

ISO/IEC TR 29158

First edition 2011-10-15

Information technology — Automatic identification and data capture techniques — Direct Part Mark (DPM) Quality Guideline

Technologies de l'information — Techniques automatiques d'identification et de capture de données — Ligne directrice de qualité du marquage direct sur pièce (DPM)



ISO/IEC TR 29158:2011(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2011

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.org
Web www.iso.org

Published in Switzerland

Contents

Page

Forewo	ord	įν
Introdu	uction	٠,
1	Scope	.1
2	Normative references	.1
3	Terms and definitions	. 1
4	Abbreviated terms	. 2
5 5.1 5.2	Overview of methodology Process differences from 15415 Lighting	. 3
6 6.1 6.2 6.3 6.4 6.5	Obtaining the image Orientation of the symbol to the camera Lighting Image focus Reflectance calibration Initial image reflectance level of the symbol under test	.3 .4 .4
7 7.1 7.2 7.3 7.4	Obtaining the test image Binarize image	.5 .5
8 8.1 8.2 8.3	Determine contrast parameters	.8 .8
9 9.1 9.2 9.3 9.4 9.5	Grading Cell Contrast (CC) Minimum Reflectance Cell Modulation (CM) Fixed pattern damage Final grade	.8 .8 .8
10 10.1 10.2 10.3 10.4	Communicating grade requirements and results	.9 .9 .9
Annex	A (normative) Threshold determination method	11
Annex	B (informative) Communicating the grade	15
Annex	C (informative) Cross-reference to ISO/IEC 15415	18

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.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example) it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

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 TR 29158 was prepared jointly by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.