This is a preview - click here to buy the full publication

INTERNATIONAL STANDARD

ISO/IEC 26514

First edition
2008-06-15

Systems and software engineering — Requirements for designers and developers of user documentation

Ingénierie du logiciel et des systèmes — Exigences pour les concepteurs et les développeurs de la documentation de l'utilisateur

Withdrawn

Reference number
ISO/IEC 26514:2008(E)

© ISO/IEC 2008

This is a preview - click here to buy the full publication

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.

withdrawn

COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2008

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

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

Contents

Page

Foreword ... viii

Introduction ... ix

1 Scope ... 1

2 Conformance ... 3
2.1 Application of conformance ... 3
2.2 Conformance situations ... 3

3 Normative references ... 4

4 Terms and definitions ... 4

5 User documentation process within the systems/software life cycle ... 10

6 Project requirements, objectives, and constraints ... 13
6.1 Project objectives ... 13
6.2 User documentation requirements and constraints ... 14
6.3 Project goals and constraints ... 15
6.3.1 Project infrastructure and tools ... 16
6.3.2 Schedule constraints ... 16
6.4 Users and usability objectives ... 17
6.5 Interviewing technical contacts and other experts ... 19
6.6 Project planning ... 19
6.6.1 Quality management ... 20
6.6.2 Version control and change control ... 21
6.6.3 Availability of resources ... 21
6.6.4 Schedules ... 22
6.6.5 Cost estimating ... 23
6.6.6 Planning for localization and customization ... 24
6.7 Documentation proposal ... 24

7 Analysis and design ... 25
7.1 Audience and task analysis ... 25
7.1.1 Audience analysis ... 25
7.1.2 Audience profiles ... 27
7.1.3 Task analysis ... 28
7.2 User documentation design ... 30
7.2.1 Designing for use of content ... 31
7.2.2 Designing formats ... 31

8 Development and review ... 32
8.1 Prototypes and drafts ... 32
8.1.1 CM during development ... 33
8.1.2 Development of translated and localized documentation ... 33
8.2 Evaluation of documentation ... 34
8.2.1 Other roles in evaluation of documentation quality ... 35
8.2.2 Documentation review procedures ... 36
8.3 Documentation testing ... 38
8.3.1 Types of documentation tests ... 38
8.3.2 Usability tests ... 39

9 Production ... 40
9.1 Final assembly and review ... 40
9.2 Approval ... 40
9.3 CM ... 41

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

9.4 Updating and maintenance 41

10 Structure of documentation 41
10.1 Overall structure of documentation 42
10.1.1 Structure of instructional mode documentation 43
10.1.2 Structure of reference mode documentation 43
10.2 Structure of documentation according to audience needs 43
10.3 Size of topics in onscreen documentation 45
10.4 User documentation components 46
10.5 Placement of user documentation components 47
10.5.1 Initial components 47
10.5.2 Placement of critical information 47

11 Information content of user documentation 47
11.1 Completeness of information 48
11.2 Accuracy of information 48
11.3 Content of identification data 48
11.4 Information for use of the documentation 49
11.5 Concept of operations 50
11.6 Information for general use of the software 51
11.7 Information for procedures and tutorials 52
11.7.1 Preliminary information for procedures 52
11.7.2 Procedural steps 52
11.7.3 Completion information for procedures 53
11.7.4 Tutorials 54
11.8 Information on software commands 54
11.9 Explanations of data entry fields 55
11.10 Content of error messages and problem resolution 55
11.11 Content of warnings and cautions 56
11.12 Information on terminology 57
11.13 Information on related information sources 57
11.14 User-supplied content 58

12 Presentation format of documentation 59
12.1 General 59
12.2 Use of printed or on-screen formats 60
12.3 Selection of appropriate media and format 61
12.3.1 Comparison of media 61
12.3.2 Relationship of information displays to the application's displays 63
12.4 Context-sensitive information 63
12.5 Accessible documentation 64
12.5.1 Provide understandable documentation 64
12.5.2 Provide user documentation in accessible electronic form 65
12.5.3 Provide text alternatives in on-screen documentation 65
12.5.4 Write instructions without unnecessary device references 65
12.5.5 Provide documentation on accessibility features 65
12.6 Consistency of formats 65
12.7 Consistency of terminology 66
12.8 Layout of screens and pages 67
12.8.1 Grids 67
12.8.2 Non-scrolling areas 68
12.8.3 Arrangement of windows 68
12.8.4 Formats for information area (text) 69
12.8.5 Formats for headings 69
12.8.6 Blank space and borders 69
12.8.7 Vertical spacing 70
12.9 Legibility 70
12.9.1 Typefaces and text size 71
12.9.2 Highlighting text 71
12.9.3 Lines of text 72
12.10 Formats for lists 72

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

12.11 Formats for representing user interface elements ... 73
12.11.1 Representing control and command input ... 73
12.11.2 Representing special keyboard keys ... 73
12.12 Use of color ... 74
12.13 Navigational features ... 75
12.13.1 Using formats to indicate position within a topic ... 75
12.13.2 Finding the same information again ... 76
12.13.3 Viewing topics in sequence ... 76
12.13.4 Formats for active areas ... 76
12.13.5 Linking information ... 77
12.14 Documentation formats for finding information ... 77
12.14.1 Table of contents ... 77
12.14.2 Menus ... 78
12.14.3 List of illustrations ... 79
12.14.4 Index ... 79
12.14.5 Search capability ... 80
12.15 Formats for warnings, cautions, and notes ... 80
12.16 Format for instructions ... 81
12.17 Formats for user-supplied annotations ... 81
12.18 Formats for illustrations ... 81
12.18.1 When to use an illustration ... 81
12.18.2 Level of detail in illustrations ... 82
12.18.3 Identification of illustrations ... 82
12.18.4 Consistent presentation of illustrations ... 82
12.18.5 Placement of illustrations ... 83
12.18.6 Illustrations of screen displays ... 83
12.18.7 Illustrations of printed output ... 84
12.18.8 Tables ... 85
12.19 Icons and signposts ... 85
12.19.1 When to use icons and signposts ... 85
12.19.2 Design of icons and signposts ... 85
12.19.3 Displaying the names of icons ... 86
12.20 Documentation packaging ... 87

Annex A (informative) User documentation style guide content ... 88
A.1 Writing style ... 88
A.2 Language ... 88
A.3 Spelling ... 88
A.4 Grammar and usage ... 88

Annex B (informative) Writing style and techniques for user documentation ... 89
B.1 General ... 89
B.2 Style for sentences ... 90
B.3 Style for paragraphs ... 94
B.4 Style for quick-reference information ... 95
B.5 Style for installation instructions ... 95
B.6 Style for tutorials and task instructions ... 96
B.7 Style for describing user interface elements ... 96
B.8 Style for descriptions and explanations ... 96
B.9 Style for on-screen information ... 97
B.10 Style for lists ... 97

Annex C (informative) User documentation style for translation and localization ... 98
C.1 General ... 98
C.2 Terminology ... 98
C.3 Style for translation ... 99
C.4 Cultural factors ... 100

Annex D (informative) Design, development, and production of printed information ... 102
D.1 Introduction ... 102
D.2 Design ... 102
D.3 Production phase ... 110

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

Annex E (informative) **Checklists for user documentation** **114**
E.1 Checklist for printed manuals **114**
E.2 Checklist for online help **117**
Annex F (informative) **Requirements clauses and checklist for the documentation process** **121**
Annex G (informative) **Requirements clauses and checklist for documentation products** **127**
Bibliography **141**

List of Figures

Figure 1 — Sample process of defining the usability goals for an electronic mail system 18
Figure 2 — Sample contents list for a documentation proposal 25
Figure 3 — Sample list of audiences for part of an order fulfillment system 26
Figure 4 — Sample of an audience hierarchy 26
Figure 5 — Sample audience profile 28
Figure 6 — Sample task list for an electronic mail system 28
Figure 7 — Sample task hierarchy 29
Figure 8 — Using audience information needs to determine document content 44
Figure 9 — Using information type and usage to determine delivery method 45
Figure 10 — Sample presentation of an example 50
Figure 11 — Sample overview for a software product module 51
Figure 12 — Sample function description for a spreadsheet function 55
Figure 13 — Sample definition of a term 57
Figure 14 — Sample links to related information 58
Figure 15 — Sample grid for a help system navigator and a topic window 68
Figure 16 — Example of a contents list 78
Figure 17 — Sample text menu 79
Figure 18 — Use of two scales for screen displays 84
Figure D.1 — Example of an A5 page grid 107
Figure D.2 — Example of an A5 page 108

List of Tables

Table 1 — Audience mapping matrix 30
Table 2 — Components of documentation 46

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

Table 3 — Example of procedures with the elements marked 53

Table 4 — Sample Information Profile for one task and one audience 61

Table 5 — Advantages and disadvantages of various media 62

Table 6 — Examples of access methods 64

Table B.1 — Example of conditions presented as a table 91

Table D.1 — Methods of producing multiple copies 103

withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

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 26514 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

Introduction

Anyone who uses application software needs accurate information about how the software will help the user accomplish a task. The documentation may be the first tangible item that the user sees and therefore influences the user's first impressions of the software product. If the information is supplied in a convenient form and is easy to find and understand, the user can quickly become proficient at using the product. Hence, well-designed documentation not only assists the user and helps to reduce the cost of training and support, but also enhances the reputation of the product, its producer, and its suppliers.

Although software developers aim to design user interfaces that behave so intuitively that very little separate documentation is needed, this is rarely possible. Today's software offers increasingly robust functionality, not only within applications, but also across applications that intelligently exchange information with one another. Further, most software designs include underlying rules and calculations, or algorithms, that affect the results a user can obtain when using the software. Such underlying programming mechanics are discernable by users, but only through laborious testing. For these reasons and more, user documentation remains an essential component of usable software products.

Documentation is often regarded as something done after the software has been implemented. However, for high-quality software documentation, its development should be regarded as an integral part of the software life cycle process. If done properly, documentation or information management is a big enough job to require process planning in its own right.

This International Standard was developed to assist users of ISO/IEC 15288:2008, *Systems and software engineering — System life cycle processes*, or ISO/IEC 12207:2008, *Systems and software engineering — Software life cycle processes*, to design and develop documentation as part of the software life cycle processes. It defines the documentation process from the documentation developer's standpoint.

NOTE Other International Standards in the ISO/IEC 265NN family are in preparation or planned to address the documentation and information management processes from the viewpoints of managers, assessors and testers, and acquirers and suppliers.

In addition to defining a standard process, this International Standard also covers the documentation product. This International Standard specifies the structure, content, and format for documentation, and also provides informative guidance for user documentation style.

Earlier standards tended to view the results of the documentation process as a single book or multivolume set: a one-time deliverable. Increasingly, documentation designers recognize that most user documentation is now produced from managed re-use of previously developed information (single-source documentation), adapted for new software versions or presentation in various on-screen and printed media. While this International Standard does not describe how to set up a content management system (CMS), it is applicable for documentation organizations practicing single-source documentation.

This International Standard is independent of the software tools that may be used to produce documentation, and applies to both printed documentation and on-screen documentation. Much of its guidance is applicable to user documentation for systems including hardware as well as software user documentation.

This International Standard conforms to ISO/IEC 12207:2008 as an implementation of subclause 7.2.1, Software Documentation Management Process, for software user documentation. This International Standard may be used as a conformance or a guidance document for documentation products, projects, and organizations claiming conformance to ISO/IEC 15288:2008 or to ISO/IEC 12207:2008.

The primary sources for this International Standard are previous standards IEEE Std 1063-2001, *IEEE standard for software user documentation,* and ISO/IEC 18019:2004, *Software and system engineering — Guidelines for the design and preparation of user documentation for application software.*

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

Systems and software engineering — Requirements for designers and developers of user documentation

1 Scope

This clause presents the scope, purpose, organization, and candidate uses of this International Standard.

This International Standard supports the interest of software users in consistent, complete, accurate, and usable documentation. It includes both approaches to standardization: a) process standards, which specify the way in which documentation products are to be developed; and b) documentation product standards, which specify the characteristics and functional requirements of the documentation.

The first part of this International Standard covers the user documentation process for designers and developers of documentation. It describes how to establish what information users need, how to determine the way in which that information should be presented to the users, and how to prepare the information and make it available. It is not limited to the design and development phase of the life cycle, but includes activities throughout the information management and documentation processes.

The second part of this International Standard provides minimum requirements for the structure, information content, and format of user documentation, including both printed and on-screen documents used in the work environment by users of systems containing software. It applies to printed user manuals, online help, tutorials, and user reference documentation.

This International Standard neither encourages nor discourages the use of either printed or electronic (on-screen) media for documentation, or of particular documentation development or management tools or methodologies.

This International Standard may be helpful for developing the following types of documentation, although it does not cover all aspects of them:

- documentation of products other than software;
- multimedia systems using animation, video, and sound;
- computer-based training (CBT) packages and specialized course materials intended primarily for use in formal training programs;
- documentation produced for installers, computer operators, or system administrators who are not end users;
- maintenance documentation describing the internal operation of systems software;
- documentation incorporated into the user interface itself.

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

This International Standard is applicable to documentation designers and developers, including a variety of specialists:

- information designers and architects who plan the structure and format of documentation products in a documentation set;
- usability specialists and business analysts who identify the tasks that the intended users will perform with the software;
- those who develop and edit the written content for user documentation;
- graphic designers with expertise in electronic media;
- user interface designers and ergonomics experts working together to design the presentation of the documentation on the screen.

This International Standard may also be consulted by those with other roles and interests in the documentation process:

- managers of the software development process or the documentation process;
- acquirers of documentation prepared by suppliers;
- usability testers, documentation reviewers, subject-matter experts;
- developers of tools for creating on-screen documentation;
- human-factors experts who identify principles for making documentation more accessible and easily used.

This International Standard is intended for use in all types of organizations, whether or not a dedicated documentation department is present, and may be used as a basis for local standards and procedures. Readers are assumed to have experience or knowledge of software development or documentation development processes.

Users of this International Standard should adopt a style manual for use within their own organizations to complement the guidance provided in the annexes to this International Standard, or adopt an industry-recognized style guide. Annex A provides guidance for the content of a style guide, and Annexes B and C provide guidance on style.

The order of clauses in this International Standard does not imply that the documentation should be developed in this order or presented to the user in this order.

In each clause, the requirements are media-independent, as far as possible. Requirements specific to either print or electronic media are identified as such, particularly in Clause 12. Annex D provides guidance for the design of printed documentation.

The checklists in Annex E may be used at each phase of the documentation process to check that the appropriate steps have been carried out and that the finished documentation satisfies quality criteria.

The checklists in Annexes F and G may be used to track conformance with the requirements of this International Standard for documentation processes and products.

The bibliography lists works that provide guidance on the processes of managing, preparing, and testing user documentation.

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

2 Conformance

This International Standard may be used as a conformance or a guidance document for projects and organizations claiming conformance to ISO/IEC 15288:2008 or ISO/IEC 12207:2008.

2.1 Application of conformance

Whether the organization or project has tailored the selected software life cycle processes or adopted them in full, the organization or project may claim conformance to this International Standard for its documentation process, for the documentation, or for both.

This International Standard is meant to be tailored so that only necessary and cost-effective requirements are applied to documentation. Tailoring may take the form of specifying approaches to conform to its mandatory requirements, or altering its non-mandatory recommendations and approaches to reflect the particular software and documentation product more explicitly. Tailoring decisions made by the acquirer should be specified in the contract.

Throughout this International Standard, “shall” is used to express a provision that is binding, “should” to express a recommendation among other possibilities, and “may” to indicate a course of action permissible within the limits of this International Standard. When using this International Standard as a guide, replace the term “shall” with “should”. Use of the nomenclature of this International Standard for the parts of user documentation (that is, chapters, topics, pages, screens, windows) is not required to claim conformance.

NOTE All “shall” statements are listed in Annex F and Annex G.

2.2 Conformance situations

Conformance of user documentation may be interpreted differently for various situations. The relevant situation shall be identified in the claim of conformance:

1) When conformance is claimed for an organization, the organization shall make public a document declaring its tailoring of the life cycle process.

   NOTE 1 One possible way for an organization to deal with clauses that cite “the documentation plan” is to specify that they shall be interpreted in the project plans for any particular documentation project.

2) When conformance is claimed for a project, the project plans or the contract shall document the tailoring of the documentation requirements.

   NOTE 2 A project’s claim of conformance is typically specified with respect to the organization’s claim of conformance.

3) When conformance is claimed for a multi-supplier program, it may be the case that no individual project may claim conformance because no single contract calls for all the required activities. Nevertheless, the program, as a whole, may claim conformance if each of the required activities is produced by an identified party. The program plans shall document the tailoring of the required tasks, and their assignment to the various parties, as well as the interpretation of clauses of this International Standard that reference “the contract”.

4) When conformance is claimed for documentation products, the organization or project should specify whether conformance applies to a single document, a documentation set, or all user documentation produced through the organization's content management processes.

This International Standard may be included or referenced in contracts or similar agreements when the parties (called the acquirer and the producer or supplier) agree that the supplier will deliver documentation in accordance with this International Standard. It may also be adopted as an in-house standard by a project or organization that decides to produce documentation in accordance with this International Standard.

Withdrawn

© ISO/IEC 2008 – All rights reserved

This is a preview - click here to buy the full publication

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 12207:2008, *Systems and software engineering — Software life cycle processes*

ISO/IEC 15288:2008, *Systems and software engineering — System life cycle processes*

IEEE Std 100-2000, *The Authoritative Dictionary of IEEE Standards Terms,* Seventh Edition

withdrawn

© ISO/IEC 2008 – All rights reserved