

IEEE Standard for Adoption of ISO/IEC 26514:2008 Systems and Software Engineering— Requirements for Designers and Developers of User Documentation

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IEEE Standard for Adoption of ISO/IEC 26514:2008 Systems and Software Engineering— Requirements for Designers and Developers of User Documentation

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**Software & Systems Engineering Standards Committee
of the
IEEE Computer Society**

Approved 8 November 2010

IEEE-SA Standards Board

Abstract: This standard provides requirements for the design and development of software user documentation as part of the life cycle processes. It defines the documentation process from the viewpoint of the documentation developer. It also covers the documentation product. It specifies the structure, content, and format for user documentation, and also provides informative guidance for user documentation style. It 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 this standard is also applicable to user documentation for systems including hardware.

Keywords: information design, information development, procedures, software user documentation, user manual

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Introduction

This introduction is not part of IEEE Std 26514-2010, IEEE Standard for Adoption of ISO/IEC 26514:2008, Systems and Software Engineering—Requirements for Designers and Developers of User Documentation.

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. This standard specifies the processes for designing and developing software user documentation, and provides the minimum requirements for these activities. It covers establishing project requirements, objectives, and constraints; audience and task analysis; user documentation design, development, and review. It is relevant to project managers, information designers and usability specialists, and information developers such as writers, editors, and illustrators. It applies to both printed and on-screen user documentation, whether produced concurrently with the software or subsequently. This standard is independent of the software tools that might be used to produce documentation. Much of its guidance is applicable to user documentation for systems including hardware as well as to software user documentation.

In addition to defining a standard process for the design and development of user documentation, this standard also covers the documentation product. This standard specifies the structure, content, and format for user 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 standard does not describe how to set up a content management system, it is applicable for documentation organizations practicing single-source documentation.

The IEEE contributed IEEE Std 1063™-2001, IEEE Standard for Software User Documentation, as a source for this standard. IEEE Std 26514-2010 completely supersedes and replaces IEEE Std 1063-2001.

This standard is part of a series including IEEE Std 26513™-2010, IEEE Standard for Adoption of ISO/IEC 26513:2009, Systems and Software Engineering—Requirements for Testers and Reviewers of Documentation. Other standards in the IEEE Std 26514 series are forthcoming to address requirements for user documentation management and for acquisition and supply of user documentation. It conforms to the information management and software documentation management processes required in ISO/IEC 15288:2008 (IEEE Std 15288™-2008), *Systems and software engineering — System life cycle processes*, and ISO/IEC 12207:2008 (IEEE Std 12207™-2008), *Systems and software engineering — Software life cycle processes*.

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**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*

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Foreword

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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.

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

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*.

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.