INTERNATIONAL STANDARD

ISO/IEC/ IEEE 23026

First edition
2015-05-15

Systems and software engineering — Engineering and management of websites for systems, software, and services information

Ingénierie des systèmes et du logiciel — Ingénierie et gestion de sites web pour les systèmes, logiciels et services d'information

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Reference number
ISO/IEC/IEEE 23026:2015(E)

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Published in Switzerland

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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.

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of ISO/IEC JTC 1 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/IEEE 23026 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*, in cooperation with the Systems and Software Engineering Standards Committee of the IEEE Computer Society, under the Partner Standards Development Organization cooperation agreement between ISO and IEEE.

This first edition of ISO/IEC/IEEE 23026 replaces and supersedes ISO/IEC 23026:2006, which was the adoption of IEEE Std 2001 (TM)-2002, IEEE Recommended Practice for the Internet — Website Engineering, Website Management, and Website Life Cycle. The IEEE contributed IEEE Std 2001-2002 as a source for this standard.

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Introduction

The increase in use of the World Wide Web for every type of communication, and the accelerating development of new technical protocols, products, and services, for website development and hosting, have both simplified and complicated the engineering and management of websites. Because of the ready availability of commercial website providers, it has become simpler for information and communications technology (ICT) enterprises of all sizes to launch websites to present technical information. The growth in global communities of interest in software, systems, and services has expanded the creation of information from many sources. To a large extent, use of digital communications, particularly those accessible through the Internet or Intranets, has supplanted printed publications for conveying technical information. This trend applies to systems and user documentation as well as to service management and operational plans, policies, and procedures.

Other factors have also affected the design and operation of websites since the original publication of ISO/IEC 23026–IEEE Std 2001-2002, a source for this International Standard. The prevalence of automated search engines to locate technical information results in new considerations for website design. The increasing sophistication of information security threats to technical enterprises and their information, as well as concerns for the privacy of Internet users, have markedly complicated the process of delivering ICT information over the Web. This revision of ISO/IEC 23026 therefore has increased emphasis on information security and privacy concerns.

The diversity of websites for commercial marketing and social networking purposes reflects different interests and media choices from those websites that deliver ICT reference information. This revision of ISO/IEC 23026 applies primarily to websites whose purpose is to deliver information about ICT systems, software, and services. It includes increased emphasis on the human factors concerns for making information easily retrievable and usable for the intended audience. It recommends practices for websites based on World Wide Web Consortium (W3C®) and related industry guidelines, which have changed significantly since the original version of this International Standard. With rapid changes in technology, users may seek current technical guidance to fulfill the intent of this International Standard. It continues to address the entire life cycle of website strategy, design, and ongoing sustainment that are the responsibility of the website owner.

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1 Scope

This International Standard defines system engineering and management requirements for the life cycle of websites including strategy, design, engineering, testing and validation, and management and sustainment for Intranet and Extranet environments.

This International Standard applies to those using web technology to present information and communications technology (ICT) information, such as user documentation for systems and software, life-cycle documentation for systems and software engineering projects, and documentation of policies, plans, and procedures for IT service management. This International Standard provides requirements for website owners and website providers, managers responsible for establishing guidelines for website development and operations, for software developers and operations and maintenance staff who may be external or internal to the website owner's organization. It applies to websites for public access and for limited access, such as for users, customers, and subscribers seeking information on IT products and services.

The goal of this International Standard is to improve the usability of informational websites and ease of maintenance of managed Web operations in terms of:

a) locating relevant and timely information,

b) applying information security management,

c) facilitating ease of use,

d) providing for consistent and efficient development and maintenance practices.

This International Standard is not intended for websites used primarily for marketing or sales, or to deliver instructional material, or to provide Graphical User Interfaces (GUI) for business or consumer transactional application processing. However, this International Standard may provide useful insights for managing such sites.

This International Standard focuses on vendor- and product-independent considerations. It does not include specifications for application development tools, programming languages used for archiving site content or for presentation of content on the web, metadata tags, or protocols for web page design based on World Wide Web Consortium (W3C®) and related industry guidelines. It does not address tools or systems used for management or storage of information content (data, documents) that may be presented on websites.

This International Standard does not address the design and architecture of software supporting the Internet.

2 Conformance

Throughout this International Standard, "shall" is used to express a provision that is normative, "should" to express a recommendation among other possibilities, and "may" to indicate a course of action permissible within the limits of this International Standard.

Use of the nomenclature of this International Standard for the parts of a website is not required to claim conformance to the International Standard.

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EXAMPLE Referring to the home page as the landing page or main page.

Conformance to this International Standard may only be claimed by an organization if all of the requirements in the standard are met by the organization or by its suppliers.

EXAMPLE When conformance is claimed for a website for which one organization provides the site content and another supplier is responsible for website presentation and operation, the site owner may claim conformance if each of the requirements are met by an identified party.

This International Standard may be included or referenced in contracts or similar agreements when the parties (called the acquirer and the supplier) agree that the supplier shall deliver services in accordance with the standard. This International Standard may also be adopted as an in-house standard by a project or organization that decides to develop and maintain a website in accordance with the standard.

3 Normative references

There are no normative references for this International Standard. The user is encouraged to consult the latest edition of the referenced documents (including any amendments) listed in the Bibliography.

4 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC/IEEE 24765 (www.computer.org/sevocab) and the following apply.

4.1
archival page
content that is preserved as a record and not expected to change

Note 1 to entry: Due to technology upgrades, some archival pages cannot be readily rendered unless they are upgraded along with active pages.

4.2
audience
category of users sharing the same or similar characteristics and needs (for example, purpose in using the documentation, tasks, education level, abilities, training, and experience) that determine the content, structure, and use of the intended documentation

Note 1 to entry: There may be a number of different audiences for a software product's documentation (for example, management, data entry, maintenance).

4.3
body metadata
elements in the body of an HTML document providing administrative and/or navigational facilities for the user or administrator

4.4
breadcrumb trail
navigational aid with a displayed series of hyperlinks which lead from the home page to the current page, allowing the user to return to previously viewed pages

4.5
browser
application allowing a person to retrieve and read hypertext, to view the contents of hypertext nodes (Web pages), to navigate from one Web page to another, and to interact with the content, such as changing the visual appearance of the displayed content

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