BS ISO/IEC/IEEE 26512:2018

BSI Standards Publication

Systems and software engineering — Requirements for acquirers and suppliers of information for users

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National foreword

This British Standard is the UK implementation of ISO/IEC/IEEE 26512:2018. It supersedes BS ISO/IEC 26512:2011, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee IST/15, Software and systems engineering.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Systems and software engineering — Requirements for acquirers and suppliers of information for users

Ingénierie du logiciel et des systèmes — Exigences pour acquéreurs et fournisseurs de documentation utilisateur

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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 26512:2018 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*, in cooperation with the Software and Systems Engineering Standards Committee of the IEEE Computer Society, under the Partner Standards Development Organization cooperation agreement between ISO and IEEE.

This second edition of ISO/IEC/IEEE 26512 cancels and replaces ISO/IEC/IEEE 26512:2010 with minor revisions:

— removal of superfluous definitions;
— updated version of the information management process from the normative standard ISO/IEC/IEEE 15288:2015;
— the addition of cross-reference Table 1, Acquirer and supplier processes;
— updates to the Bibliography; and
— editorial changes.

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Introduction

This document was developed to assist users of ISO/IEC/IEEE 15288:2015 or ISO/IEC 12207 to acquire or supply systems and software information for users and information services as part of the life cycle processes. It defines the information development process from the acquirer's standpoint and the supplier's standpoint. This document addresses the identification, definition, and fulfillment of requirements for information for users as part of the acquisition and supply processes.

This document covers the requirements for information items used in the acquisition of information for users: the acquisition plan, document specification, statement of work, request for proposals, and the proposal. It also discusses the use of a Document Plan in the acquisition and supply processes.

This document is independent of the software tools that can be used to produce information for users, and applies to both printed and on-screen material, and to other media such as video or augmented reality systems. Much of its guidance is applicable to information for users for systems including hardware as well as software.

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

Anyone who uses products that contain software needs accurate information about how the software will help the user accomplish a task. Information for users can be the first tangible item that the user sees, and so influences the user's first impressions of the 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. Therefore, well-designed information for users 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 intend to design user interfaces that behave so intuitively that very little separate information is needed, this is rarely possible. Today's software offers increasingly robust functionality, not only within applications, but also across applications which intelligently exchange information with one another. Further, most software includes underlying rules and calculations, or algorithms that affect the results a user can obtain when using the software. These underlying programming mechanics are discernable by users, but only through laborious testing. For these and other reasons, information for users remains an essential component of usable software products and systems.

Information for users is often regarded as something done after the system has been implemented. However, for high-quality information, its development needs to be regarded as an integral part of the software or system life cycle. In fact, quality information for users or information management services are important enough to require specific planning.

Related standards for those acquiring and supplying information for software users include ISO/IEC 26514:2008 (IEEE Std 26514-2010), *Systems and software engineering — Requirements for designers and developers of user documentation,* and ISO/IEC/IEEE 26513, *Systems and software engineering — Requirements for testers and reviewers of information for users.* Other International Standards address the information for users and information management processes from the viewpoint of managers and agile projects.

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This document is consistent with ISO/IEC 12207 and ISO/IEC 15288:2015 as an implementation of the Acquisition and Supply processes, which comprise the Agreement processes, and of the Information Management process.

This document is intended for use in all types of organizations, whether they have a dedicated documentation department or not. It can be used as a basis for local standards and procedures. Readers are assumed to have experience or knowledge of general agreement processes for acquisition and supply of products and services.

The order of clauses in this document does not imply that the acquisition activities need to be performed in this order, nor that information for users needs to 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.

The checklists in Annexes A and B can be used to track conformance with the requirements of this document for acquirers and suppliers of information products.

The Bibliography contains references to source material used in the development of this document, as well as sources of additional information that might be useful to acquirers and suppliers.

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Systems and software engineering — Requirements for acquirers and suppliers of information for users

1 Scope

This document supports the interest of system users in having consistent, complete, accurate, and usable information. It addresses both available approaches to standardization: a) process standards, which specify the way that information products are to be acquired and supplied; and b) information product standards, which specify the characteristics and functional requirements of the information.

As defined in ISO/IEC/IEEE 12207 and ISO/IEC/IEEE 15288:2015, the acquisition and supply activities make up the agreement processes of the software or system life cycle. Acquisition and supply of information for users and related services are specializations of those processes. Such services can be acquired and supplied for any part of the information management process, such as the following:

— information management;

— information design and development;

— information editing and review coordination;

— information testing, particularly usability testing;

— information production and packaging;

— information distribution and delivery;

— advice on the selection and implementation of information development tools and supporting systems; and

— information development process improvement.

This document provides an overview of the information management processes that are relevant to the acquisition and supply of information for users. It applies the Agreement processes (acquisition and supply) to information for users, and addresses the preparation of requirements for this information. These requirements are central to the information for users specification and statement of work discussed in this document. This document also addresses requirements for primary document outputs of the acquisition and supply process: the request for proposal and the proposal for documentation products and services.

This document is intended for use in acquiring or supplying any type of information for users and is independent of information development or management tools or methodologies.

This document might be helpful for acquiring and supplying the following types of information, although it does not cover all aspects of them:

— multimedia systems using animation, video, and sound;

— computer-based training (CBT) packages and specialized course materials intended primarily for use in formal training programs;

— maintenance documentation describing the internal operation of systems software;

— collaboratively generated, often known as “wiki”, documentation, which will usually need to be curated periodically; and

— information for users incorporated into the user interface.

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This document is applicable to acquirers and suppliers of information for users, including a variety of specialists:

— analysts (e.g., business analysts, human factors engineers) who identify the tasks that the intended users will perform with the system;

— managers of the software or system development process or the information management process;

— managers of the acquisition process, and those who authorize and approve acquisitions; and

— managers and authors involved in proposal preparation.

It can also be consulted by those with other roles and interests in the information development process:

— information designers and architects who plan the structure, format, and content requirements of information products;

— experienced authors and editors who develop the written content for information for users;

— graphic designers with expertise in electronic media;

— user interface designers and ergonomics experts working together to design the presentation of the information on the screen;

— usability testers, information development reviewers, technical contacts;

— developers of tools for creating on-screen information for users.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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/IEEE 12207, *Systems and software engineering — Software life cycle processes*

ISO/IEC/IEEE 15288:2015, *Systems and software engineering — System life cycle processes*

3 Terms and definitions

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

ISO, IEC and IEEE maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org
— ISO Online browsing platform: available at http://www.iso.org/obp
— IEEE Standards Dictionary Online: available at http://dictionary.ieee.org

3.1
accessibility
usability of a software or information product, service, environment, or facility by people with the widest range of capabilities

Note 1 to entry: Although "accessibility" typically addresses users who have disabilities, the concept is not limited to disability issues.

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[SOURCE: ISO/IEC 26514:2008, Modified, Note 2 to entry has become Note 1 to entry, original Note 1 to entry has been deleted.]

3.2
analysis
investigation and collection phase of development that aims to specify types of users and their informational needs

[SOURCE: ISO/IEC/IEEE 24765:2010]

3.3
audience
category of users sharing the same or similar characteristics and needs (for example, reason for using the information, tasks, education level, abilities, training, experience)

Note 1 to entry: There can be different audiences for information for users (for example, management, data entry, maintenance) that determine the content, structure, and use of the information.

[SOURCE: ISO/IEC 26514:2008, Note 1 to entry modified and editorially revised: "intended documentation" has become "information."]

3.4
change control procedure
actions taken to identify, document, review, and authorize changes to a software or information product that is being developed

Note 1 to entry: The procedures help to ensure that the validity of changes is confirmed, that the effects on other items are examined, and that those people concerned with the development are notified of the changes.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry editorially revised.]

3.5
configuration management
discipline applying technical and administrative direction and surveillance to:

— identify and document the functional and physical characteristics of a configuration item;

— control changes to those characteristics;

— record and report change processing and implementation status; and

— verify compliance with specified requirements.

3.6
contract
relationship between acquirer and supplier, which in broad terms prescribes that one party will provide defined goods and services and the other party will pay a defined fee for them

Note 1 to entry: In many countries, contracts do not have to be written but the terms of the contracts referred to in this document are defined in writing.

Note 2 to entry: The contract relationship can have other names, such as “agreement.” The acquirer determines which term is to be used in the application of this document.

3.7
customization
adaptation of a software or information product to the needs of a particular audience

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[SOURCE: ISO/IEC 26514:2008]

3.8
design
⟨information⟩ stage of information development that is concerned with determining what information for users will be provided in a product and what the nature of the information will be

[SOURCE: ISO/IEC 26514:2008]

3.9
development
⟨information⟩ activity of preparing information for users after it has been designed

[SOURCE: ISO/IEC 26514:2008]

3.10
document
uniquely identified unit of information for human use

EXAMPLE Report, specification, manual, or book in printed or electronic form.

Note 1 to entry: A document can be a single information item or part of a larger information item.

[SOURCE: ISO/IEC/IEEE 15289:2015]

3.11
documentation
information that explains how to use a product

Note 1 to entry: The information can be provided as documentation that can be used independently of the system or embedded within the product and accessible as an integral part of it, or both. In this document, the term "information for users" is synonymous with the terms "documentation" and "software user documentation." Other forms of documentation (for example, "system documentation") are clearly identified as such.

EXAMPLE Printed manuals, on-screen information, standalone online help, videos, pop-up help.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry combined with Note 2 to entry and editorially revised, Note 3 to entry has become an example and has been editorially revised.]

3.12
illustration
graphic element set apart from the main body of text and normally cited within the main text

Note 1 to entry: In this document, the term "illustration" is used as the generic term for tables, figures, exhibits, screen captures, flow charts, diagrams, drawings, icons, and other types of graphics.

[SOURCE: ISO/IEC 26514:2008, Modified, definition now includes the word "element," after "graphic" and Note 1 to entry editorially revised.]

3.13
internationalization
process of developing information so that it is suitable for an international audience

Note 1 to entry: See 3.14 **localization.**

[SOURCE ISO/IEC 26514:2008, Modified, Note 1 to entry added.]

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3.14
localization
creation of a national or specific regional version of a product

Note 1 to entry: See 3.13 **internationalization.**

Note 2 to entry: Localization can be performed separately from the translation process.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry modified original "cf", Note 2 to entry added.]

3.15
on-screen information
information that is intended to be read on the screen by the user while using software

EXAMPLE Pop-up help, help text on a screen.

[SOURCE: ISO/IEC 26514:2008, Modified, term was previously "on-screen documentation", definition now includes "information" while previous version included "documentation." Note 1 to entry has been editorially revised and has become an example.]

3.16
printed documentation
documentation that is either provided in printed form, or provided in electronic form for the customer or user to print

[SOURCE: ISO/IEC 26514:2008]

3.17
process
set of interrelated or interacting activities that transform inputs into outputs

[SOURCE: ISO 9000:2005]

3.18
product
result of a process

[SOURCE: ISO/IEC/IEEE 15288:2015]

3.19
product authority
person or persons with overall responsibility for the capabilities and quality of a product

[SOURCE: ISO/IEC 26514:2008]

3.20
project
set of activities for developing a new product or enhancing an existing product

[SOURCE: ISO/IEC 26514:2008]

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3.21
quality management
coordinated activities to direct and control an organization with regard to quality

[SOURCE: ISO/IEC/IEEE 15288:2015]

3.22
software
all or part of the programs, procedures, rules, and associated documentation of an information processing system

Note 1 to entry: For the purposes of this document, the term “software” does not include on-screen documentation.

[SOURCE: IEEE Std 828-2012]

3.23
style
set of language-specific editorial conventions covering grammar, terminology, punctuation, capitalization, and word choice

[SOURCE: ISO/IEC 26514:2008]

3.24
technical contact
person responsible for providing an information developer with technical information about a product or for checking the technical accuracy of drafts of information for users

Note 1 to entry: Technical contacts are often also known as subject-matter experts.

[SOURCE: ISO/IEC 26514:2008, Modified, "information developer," replaced "documentation developer," "so-called subject matter expert" removed, and Note 1 to entry added.]

3.25
topic
small part of a document that deals with a single subject

Note 1 to entry: In printed information for users, a topic is equivalent to a section (heading, subheading) and its content. In on-screen information, a topic consists of a title (heading) and information about a subject (typically, a task or a concept or reference information). For on-screen information, the system might present a topic without user intervention.

EXAMPLE Instructions on how to print the current document.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry includes content of previous Note 2 to entry with editorial modifications ("on-screen information" replaces "on-screen documentation"), Note 3 to entry has become an example.

3.26
tutorial
instructional procedure in which the user exercises system functions, often using sample data that is supplied with the system or information for users

[SOURCE: ISO/IEC 26514:2008]

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