
**Software and system engineering —
Guidelines for the design and preparation
of user documentation for application
software**

*Ingénierie du logiciel et du système — Lignes directrices pour la
conception et la préparation de la documentation de l'utilisateur de
logiciels d'application*

**iTeh STANDARD REVIEW
(standards.iteh.ai)**

ISO/IEC 18019:2004

<https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004>

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC 18019:2004](#)

<https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004>

© ISO/IEC 2004

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

Foreword	vii
Introduction	viii
1 Scope	1
2 Terms and definitions	2
3 Overview	8
3.1 Forms of documentation	8
3.2 Deciding what form of documentation to use	9
3.2.1 General	9
3.2.2 Information that needs to be on the screen	9
3.2.3 Information that generally needs to be on paper	9
3.3 Overview of the structure of this International Standard	10
3.3.1 General	10
3.3.2 Checklists	12
4 The objectives phase	12
4.1 General	12
4.2 Collect and interpret project requirements and constraints	12
4.2.1 General	12
4.2.2 Product objectives	13
4.2.3 Sales objectives	14
4.2.4 Scheduling objectives	14
4.2.5 Usability objectives	15
4.2.6 Accessibility objectives	15
4.2.7 Modification requirements	15
4.2.8 Internationalisation and national cultural requirements	16
4.2.9 Translation requirements	16
4.2.10 Packaging requirements	17
4.2.11 Legal requirements	17
4.2.12 Security	18
4.2.13 Standards and conventions	18
4.2.14 Cost constraints	19
4.2.15 Documentation delivery and viewing mechanisms	19
4.2.16 Quality management	19
4.2.17 Provision of technical information	19
4.2.18 Approval authorities	20
4.2.19 Configuration management	20
4.2.20 Availability of resources	20
4.3 Documentation Proposal	21
5 The planning phase	23
5.1 General	23
5.2 Documentation plan	23
5.2.1 General	23
5.2.2 Standards	24
5.2.3 Version control and change control	24
5.2.4 Personnel	24
5.2.5 Equipment	25
5.2.6 Responsibilities	25
5.2.7 Cost estimates	26
5.2.8 Schedules	27
5.2.9 Prototypes and drafts	27

5.2.10	System tests	28
5.2.11	Reviews	28
5.2.12	Usability testing	29
5.2.13	Localisation and customisation	29
5.2.14	Approval	29
5.2.15	Maintenance, updating and future developments	30
5.3	Review of detailed documentation plans	30
6	The analysis and design phase	30
6.1	Audiences	31
6.1.1	Audience analysis	31
6.1.2	Learning stages and frequency of use	32
6.1.3	Working environments	32
6.1.4	Audience profiles	33
6.2	Tasks	34
6.2.1	Task analysis	34
6.2.2	Mapping audiences to tasks	35
6.2.3	Task characteristics	36
6.2.4	Task profiles	36
6.3	Information	36
6.3.1	Information needs	36
6.3.2	Context of use	36
6.3.3	Volume/amount of documentation	37
6.3.4	Media	37
6.3.5	Information profile	39
6.4	Usability	39
6.4.1	Define usability goals	39
6.4.2	Record usability goals	41
6.5	Structure of the documentation suite	41
6.5.1	General	41
6.5.2	Decide what information needs to be provided in the documentation	41
6.5.3	Group information needs into documents	41
6.6	Individual document structures	43
6.6.1	Prepare a list of contents	43
6.6.2	Define the document structure	43
6.7	Document writing style	46
6.7.1	General	46
6.7.2	Awareness and appreciation information	46
6.7.3	Installation instructions	46
6.7.4	Tutorials and task instructions	47
6.7.5	Quick reference information	47
6.7.6	Reference information	47
6.7.7	Diagrams	48
6.7.8	Graphs and charts	48
6.7.9	Illustrations of screen displays	48
6.7.10	Illustrations of printed output	49
7	The development and review phase	50
7.1	General	50
7.2	Prepare and issue drafts	50
7.3	Check and review drafts	51
7.3.1	General	51
7.3.2	Reviewing the information	52
7.3.3	Usability tests	53
7.3.4	System tests	54
7.3.5	Validation and field trials	54
7.4	Prepare subsequent drafts	55
7.5	Prepare document masters	55
7.6	Hand over the finished documentation	56
7.7	Localisation and customisation	56
7.8	Archiving	56

8	The evaluation and updating phase.....	57
8.1	General	57
8.2	Evaluate the documentation	57
8.3	Update the documentation.....	57
9	Guidelines for the design of documentation.....	57
9.1	Introduction	57
9.2	Product copyright and version details	58
9.3	Overview of the documentation	59
9.4	Process descriptions.....	59
9.5	Task descriptions.....	60
9.6	Explanations of fields and options	61
9.7	Names and uses of user interface options.....	62
9.7.1	Names.....	62
9.7.2	Uses.....	62
9.8	Descriptions of application functions.....	62
9.9	Information messages	64
9.9.1	Format	64
9.9.2	On-screen messages	65
9.10	Definitions of terms	66
9.11	Concepts	67
9.12	Exploitation information.....	67
9.13	Frequently asked questions.....	68
9.14	User-supplied content	68
9.15	Navigation.....	69
9.15.1	Introduction	69
9.15.2	Accessing on-screen information.....	70
9.15.3	Finding the right information - linking information in on-screen documentation.....	71
9.15.4	Knowing what the current information is.....	74
9.15.5	Knowing the current position within a topic.....	75
9.15.6	Finding the same information again.....	75
9.15.7	Switching between the application and the documentation	75
9.15.8	Printing information.....	76
9.15.9	Moving to a different topic	76
9.15.10	Obtaining clarification or amplification of current information	77
9.15.11	Browsing through information	77
9.15.12	Viewing topics in sequence	77
9.15.13	Exiting from the on-screen documentation.....	77
9.15.14	Finding user-supplied information.....	77
9.15.15	Sizes of topics and fragments	78
9.16	Presentation	78
9.16.1	Introduction	78
9.16.2	Windowing	79
9.16.3	Layout and grids	80
9.16.4	Colour.....	82
9.16.5	Presentation of text.....	84
9.17	Icons and signposts	90
9.17.1	When to use icons and signposts.....	90
9.17.2	Design of icons and signposts.....	90
9.17.3	Displaying the names of icons	91
9.18	Presentation of illustrations.....	92
Annex A	(informative) Process checklists	93
Annex B	(informative) Design checklist	98
Annex C	(informative) Evaluation of documentation.....	114
Annex D	(informative) Writing style and techniques	119
Annex E	(informative) Design and preparation of printed information.....	131
Annex F	(informative) Writing style guides — Contents	144

Annex G (informative) ISO/IEC 18019 and related standards.....	145
Bibliography.....	146

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC 18019:2004](https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004)

<https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004>

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 member 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 shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 18019 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and system engineering*.

INTERNATIONAL STANDARD PREVIEW
(standards.iteh.ai)

ISO/IEC 18019:2004

<https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004>

Introduction

Anyone who uses application software needs accurate information about the correct way to use it. If the information is supplied in a convenient form and is easy to find and understand, the users can quickly become proficient at using the product. Consequently their view of the product is positive, with the result that their view of the supplier is positive too. 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 many software products aim to have user interfaces that behave so intuitively that very little separate documentation is needed, this is rarely possible.

Documentation is an essential component of any product. Documentation design is crucial; the success or failure of an entire product can depend on it. The documentation can be the first tangible item that the user sees, and so influences the user's first impressions of the product.

Users of application software products generally have one important feature in common: they might be experts in the tasks for which they wish to use the software, but they are not, initially, experts in using the application software itself.

Although the guidance given in this International Standard covers all the activities and all the design decisions that need to be made, some of the activities can be extremely simple to carry out in some environments, as demonstrated by the following examples. (standards.iteh.ai)

- If there are already established typographic and illustration standards and established development and production routes, very little design and planning will be needed in these areas.
<https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004>
- If the product being developed is for a single type of user with well-known user characteristics and well-defined tasks, very little user analysis will be needed.

ISO/IEC 18019 is based upon British Standards BS 7649:1993 and BS 7830:1996.

Software and system engineering — Guidelines for the design and preparation of user documentation for application software

1 Scope

This International Standard gives guidelines for the design and preparation of user documentation for application software. 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 then to prepare the information and make it available.

For the purposes of this International Standard, application software includes the types listed below.

- Consumer software packages, that is, software products designed and sold to carry out identified tasks, where the software and its associated documentation are packaged for acquisition as a unit.
- Software for office applications such as word processors, spreadsheets, databases and electronic mail.
- Business software, for example, software for recording and monitoring business activities, such as stock control and order processing. (standards.iteh.ai)
- Specialist software for use by professionals, such as accounting systems, graphic design systems and engineering design systems.

These guidelines may also be helpful for developing documentation for the following, although it does not cover all the issues relating to them.

- Software engineering products for use by computer professionals.
- Software for programmable electronic or mechanical systems.

This International Standard is for use by people responsible for specifying, designing and preparing user documentation for application software and people who manage these activities, including.

- Developers of tools for creating hardcopy documentation.
- Product designers.
- Application developers.
- Project managers.
- Authors.
- Programmers.
- Translators.
- Localisation staff.

It is intended for use in all types of organisations, whether or not a dedicated documentation department is present. In all cases, it can 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.

This International Standard may also be useful to.

- Developers of tools for creating on-screen documentation.
- People who are evaluating existing or proposed application software.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

accessibility

successful access to information and use of information technology by people who have disabilities

NOTE Although "accessibility" typically addresses users who have disabilities, the concept is not limited to disability issues.

2.2

active area

area of a screen interface that responds to user input

EXAMPLE A window, icon or text field.

2.3

active text

text displayed on the screen that responds to user input

2.4

alpha testing

first stage of testing before a product is considered ready for commercial or operational use; often performed only by users within the organisation developing the software (see also 2.11)

2.5

analysis

investigation and collection phase of development, that aims to specify types of users and their information needs

2.6

application software

software designed to help users perform particular tasks or handle particular types of problems, as distinct from software that controls the computer itself

2.7

application window

window (on-screen location) that presents an environment or application

2.8

appreciation information

awareness information

information that introduces the product to potential users, tells them what the software can do, how it can be used and helps them decide whether the product is appropriate to their needs

2.9**audience**

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

NOTE There may be a number of different audiences for a software product's documentation (e.g. management, data entry, maintenance).

[ISO/IEC 15910, definition 4.3]

2.10**author**

person designing or developing user documentation

2.11**beta testing**

final stage of testing for a computer product prior to commercial or operational release; normally involves sending the product to beta test sites outside of the company for real use exposure (see also 2.4)

2.12**bubble help**

hover help

flyover help

embedded documentation, in the form of on-screen help information consisting of small boxes containing concise text that describe items on the screen

NOTE A help bubble appears when the user moves the pointer to an item and disappears when the user moves the pointer away from the item.

2.13**change control procedures**

actions taken to identify, document, review and authorise any changes to a product being developed

NOTE The procedures ensure that the validity of changes is confirmed, that the effects on other items are examined and those people concerned with the development are notified of the changes.

2.14**chrome**

that part of the application or web browser window that lies outside the content area of the window

NOTE Title bar, status bar, scroll bars, menu bar, tool bar and location bar, are all examples of elements of the browser window that are part of the chrome. Web browser windows can be opened with or without elements of chrome visible by the inclusion of appropriate programming in the page to be displayed.

2.15**configuration management**

technical and organisational activities comprising configuration identification, control, status accounting and auditing (see also 2.50)

[ISO 10007:1995, definition 3.9]

2.16**context sensitive help**

information relevant to the user's current context in the application displayed when requested by the user

2.17**context sensitivity**

ability of on-screen documentation systems to react differently according to the state of the user's interaction with the application

2.18
customisation

process of adapting a product to the needs of a particular user or group of users

2.19
design

phase of development concerned with determining what documentation will be provided in a product and what the nature of the documentation will be (see also 2.33)

2.20
development

process of preparing documentation including phases for objectives, analysis, design and implementation, which are planned and controlled as a unit

2.21
display, noun

information presented on a screen or in a window of a screen

2.22
document, noun

equivalent to an item of documentation

[ISO/IEC 15910, definition 4.10]

2.23
documentation

printed user manuals, on-screen information and help text that describe how to use a software product

[ISO/IEC 15910, definition 4.11]

2.24
documentation plan

written statement of the essential elements of the documentation project

[ISO/IEC 15910, definition 4.13]

2.25
documentation suite

complete collection of documents comprising CDs, online help, printed manuals, etc. provided to support the user of a software product

2.26
embedded documentation

information that is delivered as an integral part of a piece of software (see also 2.53 and 3.1)

EXAMPLE On-screen help.

2.27
entry field

area on a screen or in a window in which data is entered

2.28
escrow

source code and documentation kept in the custody of a third party until specified contractual conditions have been fulfilled

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC 18019:2004](https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004)

[https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-](https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004)

[0e527ada6351/iso-iec-18019-2004](https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004)

2.29**fragment**

small piece of information about a single object such as an icon, a word or a field, that can be retrieved or displayed separately (see also 2.58)

EXAMPLE Text that appears in a help bubble (see 2.12).

2.30**function**

part of an application that provides facilities for users to carry out their tasks, such as a module, a command, a dialogue box, a transaction screen and their equivalents

2.31**hypertext**

means of presenting information online with connections (called hypertext links) between one piece of information and another.

2.32**icon**

graphic displayed on the screen that represents a function of the computer system or application or on-screen documentation system

[ISO/IEC 11581-1, definition 4.7]

2.33**implementation**

phase of development in which documentation is prepared (see also 2.19)

2.34**internationalisation**

process of developing information so that it is suitable for an international audience and can be localised

2.35**link**

navigation method that takes the user from one item of on-screen documentation to another item

2.36**localisation**

process of creating a national or specific regional linguistic version of a product

NOTE Localisation can be carried out separately from the translation process.

2.37**menu**

list of options from which the user can choose

2.38**navigation**

process of accessing on-screen documentation and moving between different items of information

2.39**on-screen documentation**

information about the software that is intended to be read on the computer screen by the user while using the software

2.40**printed documentation**

information about the software which is either provided in printed form, or in electronic form and primarily intended to be printed by the customer or user

**2.41
picture**

illustration that shows the actual appearance of physical objects

EXAMPLE Photographs, drawings or a reproduction of a screen display.

**2.42
platform**

computing environment with a particular user or programming interface, including hardware and operating system, supporting execution of application programs

**2.43
pop-up**

menu that, when requested, is displayed next to the object it is associated with; it contains choices appropriate for a given object or set of objects in their current context

**2.44
primary window**

window in which the main dialogue between the user and the application takes place

**2.45
process**

set of interrelated activities, which transform inputs into outputs

[ISO/IEC 12207:1995, definition 3.17]

iTeh STANDARD PREVIEW
(standards.iteh.ai)

**2.46
product**

software product
complete set of computer programs, procedures and associated documentation and data designed for delivery to a user

<https://standards.iteh.ai/catalog/standards/sist/a462cbff-b074-4076-8924-0e527ada6351/iso-iec-18019-2004>

**2.47
product authority**

person with overall responsibility for the capabilities and quality of a product

**2.48
project**

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

**2.49
project manager**

person with overall responsibility for the management and running of a project

**2.50
quality management**

coordinated activities to direct and control an organisation with regard to quality (see also 2.15)

[ISO 9000:2000, definition 3.2.8]

**2.51
real world object**

entity that exists in a three dimensional form, and by association infers similar properties or behaviour to software functions

EXAMPLES Printer, filing cabinet, file folder, sheet of paper.

2.52**secondary window**

window containing information that is dependent on information in a primary window and is used to supplement the information in the primary window

2.53**separate documentation**

information that is provided independently of the software (see also 2.26 and 3.1)

EXAMPLE Printed manuals and free-standing hypertext systems.

2.54**signpost**

text, symbol or a small graphic used to help the user identify where particular types of information are given or where the information in the current display fits into the whole

NOTE Information of different types may be indicated by symbols or graphics of different types

2.55**software**

the part of a product that is the computer program or the set of computer programs

NOTE For the purposes of this International Standard, the term software does not include on-screen documentation.

2.56**technical contact**

person responsible for providing an author with technical information about a product or for checking the technical accuracy of drafts of user documentation

2.57**technical specification**

data, listing the document grid, use of colour, typographic requirements, page sizes, etc.

2.58**topic**

individually named chunk of information on a single subject that is presented within the printed documentation or that can be retrieved and displayed separately as part of the on-screen documentation (see also 2.29)

NOTE For on-screen documentation, the system may present a topic without user intervention.

EXAMPLE Instructions on how to print the current document.

2.59**usability**

extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use

[ISO 13407:1999, definition 2.3 and ISO 9241-11:1998]

2.60**user**

person or business organisation that uses the software product to perform a specific function

2.61**user documentation**

information that is supplied with the software to help the user in their use of that software

2.62**user interface**

ensemble of software and hardware that enables a user to interact with a computer system