INTERNATIONAL STANDARD

ISO/IEC 25062

First edition
2006-04-01

Software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Common Industry Format (CIF) for usability test reports

Ingénierie du logiciel — Exigences de qualité du produit logiciel et évaluation (SQuaRE) — Format commun de l'industrie (CIF) pour les rapports d'essai de rentabilité

Reference number
ISO/IEC 25062:2006(E)

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.

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

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 25062 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and system engineering.*

Introduction

Usability of software is a key factor in predicting successful deployment of that software. Software manufacturers subject software to usability testing at various stages in a product's development; some companies that purchase software also test products for usability before making purchasing decisions. Testing often involves (1) subjects who are representative of the target population of users of the software, (2) representative tasks, and (3) measures of efficiency, effectiveness and subjective satisfaction. When this type of experimental situation exists, the testing is termed summative, i.e., the results can be expressed as statistically meaningful measures of central tendency (e.g. mean or median) and variability (e.g. standard deviation). The Common Industry Format (CIF) for Usability Test Reports is intended for use by usability professionals to report the results of summative usability testing.

The CIF standardizes the types of information that are captured about testing with users. The level of detail allows the same or another organization to replicate the test procedure. The major variables are user demographics, task descriptions, context of the test, including the equipment used, the environment in which the test is conducted, and the protocol by which the subjects and the test administrator(s) interact, as well as the particular metrics chosen to code the findings of the study.

The CIF is intended to replace the proprietary formats employed by companies that perform usability testing, both vendors and purchasers of software. Until now there has been no standard format for reporting usability testing results. Advantages of using a standardized reporting format include (1) a reduction in training time for usability staff since an individual only needs to learn to use one form regardless of how many companies he works for and (2) enhanced potential for increased communication between vendors and purchasing organizations since readers of CIF-compliant reports will share a common language and expectations.

The purpose of this International Standard is to facilitate incorporation of usability as part of the procurement decision-making process for interactive software products so that it is easier to judge whether a product meets usability goals. Examples of decisions include purchasing, upgrading and automating. It provides a common format for human factors engineers and usability professionals in supplier companies to report the methods and results of usability tests to customer organizations.

Audience

The Common Industry Format (CIF) is meant to be used by usability professionals within supplier organizations to generate reports that can be used by customer organizations in the CIF report. The CIF is also meant to be used by customer organizations to verify that a particular report is CIF-compliant. The Usability Test Report itself is intended for two types of readers:

— Usability professionals in customer organizations who are evaluating both the technical merit of usability tests and the usability of the products; and

— Other technical professionals and managers who are using the test results to make business decisions.

The CIF may also be used within a single organization if a formal report of a summative usability test needs to be generated. In this case additional material such as a list of detailed findings may be included.

The report is in two main sections, an Executive Summary and a main body. The main body contains the Methods and Results sections and is aimed at the first audience above. These sections (1) describe the test methodology and results in sufficient technical detail to allow replication by another organization if the test is repeated, and (2) support application of test data to questions about the product's expected costs and benefits. Understanding and interpreting these sections will require technical background in human factors or usability engineering for optimal use. The second audience is directed to the Introduction, which provides summary information for non-usability professionals and managers. The Introduction may also be of general interest to other computing professionals. Decision makers without usability engineering expertise may find the information in the main body to be useful but should rely on expert interpretation when necessary.

Organization

Clause 1 describes the scope of this specification and the conformance criteria. Clause 4 provides definitions

of the terms used throughout the document. Clause 5 is the main description of the specification.

Additional Information

Annex A provides a checklist that can be used to ensure inclusion of required and recommended information. A glossary is provided in Annex B to define terminology used in the report format description. A Word template for report production can be found at: http://www.ncits.org/ref-docs/CIF/CIF_template.dot. A printed version of the template can be found in Annex C. An example is provided in Annex D illustrating how the format is used followed by an informative bibliography.

Software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Common Industry Format (CIF) for usability test reports

1 Scope

This International Standard is intended to be used to report the measures obtained from a test of usability as defined in ISO 9241-11: effectiveness, efficiency and satisfaction in a specified context of use.

NOTE Metrics for other more-detailed usability requirements can be found in ISO/IEC 9126 parts 2 and 3.

This International Standard is intended to be used by:

— usability professionals within supplier organizations to generate reports that can be used by customer organizations;

— customer organizations to verify that a particular report conforms to this International Standard;

— human factors or other usability professionals in customer organizations who are evaluating both the technical merit of usability tests and the usability of the products; and

— other technical professionals and managers in the customer organization who are using the test results to make business decisions about product suitability and purchase.

The Executive Summary and Introduction in 5.2 and 5.3 provide summary information for nonusability professionals and managers.

Subclauses 5.4 and 5.5 describe the test methodology and results in technical detail suitable for replication, and also support application of test data to questions about the product's expected costs and benefits. Understanding and interpreting these sections will require technical background in human factors or usability engineering for optimal use.

The report format assumes sound practice [1, 2] has been followed in the design and execution of the test. Test procedures which produce measures that summarize usability should be used, i.e. the test is summative in nature. Some usability evaluation methods, such as formative tests, are intended to identify problems rather than produce measures; the format is not structured to support the results of such testing methods.

2 Conformance

A usability test report conforms to this International Standard if it complies with all the requirements in this International Standard (stated as "shall"). The recommendations (stated as "should") should be implemented whenever appropriate.

This International Standard specifies the minimum information that should be provided. Additional information may be included. For example, if an organization finds that an additional list of findings is useful, the list may be included even though it is not specified as part of a conformant CIF report.

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 9126-1:2001, *Software engineering — Product quality — Part 1: Quality model*

ISO/IEC 9126-2:2001, *Software engineering — Product quality — Part 2: External metrics*

ISO/IEC 9126-3:2001, *Software engineering — Product quality — Part 3: Internal metrics*

ISO/IEC 9126-4:2001, *Software engineering — Product quality — Part 4: Quality in use metrics*

ISO 9241-11:1998, *Ergonomic requirements for office work with visual display terminals (VDTs) — Part 11: Guidance on usability*

ISO 13407:1999, *Human-centred design processes for interactive systems — Annex C*

ISO/IEC 14598-5:1998, *Information technology — Software product evaluation — Part 5: Process for evaluators*