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**Systems and software engineering - Software product Quality
Requirements and Evaluation (SQuaRE) - Common Industry
Format (CIF) for Usability - User requirements specification**

系统和软件工程 软件产品质量要求和评估 可用性通用行业格式 用户需求说明

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is equivalent to ISO 25065:2019 "Systems and software engineering software product quality requirements and evaluation usability common industry Format

User Requirements Specification.

Introduction

Defining user requirements in a consistent manner helps develop and obtain usable interactive systems. The term "user requirements" is used in this document to "Requirements" refer to the needs of user-system interactions (interactions required to achieve the expected results) and the quality requirements related to use (in terms of effectiveness, efficiency, as part of a human-centered design approach for interactive systems, this document describes a set of user requirement specifications.

Content Elements. A common industry format for user requirement specifications designed to help human-centered design teams define user requirements for interactive systems.

ISO/IEC TR 25060 describes the Common Industry Format (CIF) for Usability, a system and software product quality requirements and evaluation system.

Part of a series of standards (ISO/IEC 25000~ISO/IEC 25099).

Usability in the Common Industry Format (CIF) refers to effectiveness, efficiency, and satisfaction as defined in ISO 9241-11.

It is defined as a result of use rather than a product quality, which is different from the definition in ISO/IEC 25010.

The CIF standards that have been published or are planned to be published include the following parts.

- Usability test report (see ISO/IEC 25062);
- description of usage scenarios (see ISO/IEC 25063);
- User need reporting (see ISO/IEC 25064);
- User requirements description (see this document);
- Usability evaluation report (see ISO/IEC 25066).

CIF is an "extension" to the ISO/IEC 25000 "System and software product quality requirements and evaluation" (SQuaRE) series of standards.

Table 1 gives the structure and content of the "System and Software Product Quality Requirements and Evaluation" (SQuaRE) series of standards.

Table 1 Structure and content of the "System and Software Product Quality Requirements and Evaluation" (SQuaRE) series of standards

SQuaRE Architecture and Subprojects ISO/IEC 2503x. Quality requirements section ISO/IEC 2505x~ISO/IEC 2509x. Extensions of SQuaRE.

--ISO/IEC 25051~ISO/IEC 2505x. Quality requirements for ready-to-use software products (RUSP);

--ISO/IEC 2506x. Usability Common Industry Format (CIF) section.

ISO/IEC 2501x. Quality Model Section ISO/IEC 2500x. Quality Management Section

ISO/IEC 2502x. Quality Measurement Section ISO/IEC 2504x. Quality Assessment Section

Figure 1 CIF file and human-centered design (see ISO 9241-210) and system life cycle process

(See ISO/IEC/IEEE 15288)

Figure 1 illustrates the CIF file, ISO 9241-210 human-centered design activities, and the corresponding ISO/IEC/IEEE 15288 system.

The interdependencies between the three life cycle processes of the system. The standards in bold represent the outputs of the CIF process. The outputs of the activities are shown in Figure 1.

In the example, a set of intersecting circles is used to represent the circle. The circles overlap to represent.

--Human-centered design aims to meet user needs;

--The activities are not isolated from each other but overlap in time and scope;

--The results of each activity can provide input to one or more other activities.

Because each human-centered design activity provides input to any other activity, there is no beginning, end, or sequence in this diagram.

Sequence process.

The human-centered design approach in ISO 9241-210 focuses on ensuring that the system is usable. Human-centered design is achieved by identifying and Communicate all relevant types of information to achieve this.

Note: ISO 9241-220 expands the goal of human-centered design to human-centered quality, namely usability, accessibility, user experience and freedom from harm in use.

Adopting human-centered design throughout the life cycle can achieve human-centered quality goals.

Human-centered design relies on user needs being first identified through the use of situation analysis. User needs are recorded in a user needs report.

The User Needs Report (ISO/IEC 25064) is an intermediate deliverable that will include the users, user tasks, and the organizational and physical environment.

The use context description of information (ISO/IEC 25063) is linked to user needs. User

needs are then recorded in the user needs statement.

This information is developed as part of the stakeholder requirements definition process described in ISO/IEC/IEEE 15288.

The "Design Solution" activity focuses on designing user interactions that meet user needs. This activity is described in ISO/IEC/IEEE 15288 it is carried out during the architecture design, implementation and integration process, and produces a "user interaction definition" and a "user interface definition".

The "Evaluate Results" activity begins at the project's inception phase and is used to evaluate design concepts to better understand user needs.

During the development of interactive systems, multiple assessments can be performed and various types of assessment reports can be output. For example, the ISO/IEC 25062 the usability data described can support the validation process in ISO/IEC/IEEE 15288 to confirm whether the system meets the requirements of stakeholders.

need.

Systems and software engineering software product quality requirements and Assessment Usability Common Industry Formats User Requirements illustrate

1 Scope

This document provides a framework and uniform terminology for defining user requirements. It provides a common industry format for user requirement specifications.

(CIF), which includes content elements and requirement specification format.

NOTE 1 A user requirements specification is a formal document of a set of user requirements that aids in the development and evaluation of a usable interactive system.

In this document, user requirements are.

- a) User-system interaction requirements to achieve the expected results (including requirements for system outputs and their properties);
- b) Usage-related quality requirements, which are used to define the quality criteria for the results of interaction between users and interactive systems, so that the system can be accepted as standards.

NOTE 2 The concept of quality requirements is introduced in ISO/IEC 25030. Usage-related quality requirements in this document are a special type of quality requirements.

The content elements of user requirements specification are intended to be part of the activities specified in ISO 9241-210 and the human-centered design process (e.g.

Part of the output of a design process such as the design process in ISO 9241-220.