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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 25000.22-2019

**Systems and software engineering -- Systems and software
Quality Requirements and Evaluation (SQuaRE) -- Part 22:
Measurement of quality in use**

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Foreword

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Introduction

1 Scope

2 Compliance

Foreword

GB/T 25000 "System and Software Engineering System and Software Quality Requirements and Evaluation (SQuaRE)" is divided into the following sections.

--- Part 1. SQuaRE Guide;

--- Part 2. Planning and Management;

--- Part 10. System and software quality models;

--- Part 12. Data quality model;

--- Part 20. Measurement reference models and guidelines;

--- Part 21. Quality measurement elements;

--- Part 22. Use quality measurement;

- Part 23. System and software product quality measurement;
- Part 24. Data quality measurement;
- Part 30. Quality requirements;
- Part 40. Evaluation process;
- Part 41. Evaluation guidelines for developers, acquirers and independent reviewers;
- Part 45. Evaluation module for recoverability;
- Part 51. Quality requirements and test details for Ready-to-Use Software Products (RUSP);
- Part 62. Ease of Use Test Report Industry Common Format (CIF).

This part is the 22nd part of GB/T 25000.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 16260.4-2006 "Software Engineering Product Quality Part 4. Measurement of Use Quality", and

Compared with GB/T 16260.4-2006, the main technical changes are as follows.

--- According to the revised quality model revised in GB/T 25000.10, a measure of the quality of use with four characteristics and no sub-characteristics

Revised to use quality measures with 5 characteristics and several sub-characteristics, the revision details are as follows.

* Modify the name of the validity measure as the validity measure (see 8.2, 8.1 of the.2006 edition);

* Modify the name of the productivity metric as the efficiency measure (see 8.3, 8.2 of the.2006 edition);

* Security measures have been removed (see 8.3 of.2006 edition);

* Increased measures of anti-risk measures and their three sub-characteristics (economic risk mitigation measures, health and safety risk mitigation)

Measurement, environmental risk mitigation measure) (see 8.5);

* Modify the name of the satisfaction measure as the measure of satisfaction and increase the measure of its four sub-characteristics (usefulness measure, credibility

Sexual measure, pleasure measure, comfort measure) (see 8.4, 8.4 edition of.2006);

* Increased the coverage of the coverage and its two sub-characteristics (perimeter completeness measure and flexibility measure) (see 8.6);

--- Classify the measure as a general measure (G) and a specific measure (S) (see Chapter 7);

--- The given quality measurement table includes ID, name, description, measurement function and method, and the modification simplifies GB/T 16260.4-

The contents of the 2006 metric table (see Table 1 to Table 13 in Chapter 8, Table 8.1 to Table 8.4 in 2006).

This section uses the redrafting method to modify the use of ISO /IEC 25022:2016 "System and Software Engineering Systems and Software Quality Requirements and Evaluation (SQuaRE) Use Quality Measurement."

This section has a small amount of structural adjustment compared to ISO /IEC 25022:2016. This section and ISO /IEC are listed in Appendix A.

25022:2016 chapter number comparison list.

There are technical differences between this part and ISO /IEC 25022:2016. The corresponding technical differences and their causes are given in Appendix B.

List of.

This section also made the following editorial changes.

--- In order to coordinate with the GB/T 25000 series of national standards, the "name 22" has been added to the standard name;

--- Modified the "quality measurement element" (qualitymeasurementelement) in the definition of 4.13 as "quality measure element"

(qualitymeasureelement), making it consistent with the term name of 4.17;

--- In Appendix D, modify the measurement function formulas of the measures SUs-1-G, SUs-2-G, RHe-2-G and CFI-2-S, so that

It is consistently written in the same way as in Table 3, Table 4, Table 10 and Table 13 of Chapter 8 of the main text;

--- In Appendix D, modify the "every new demand" in the measurement function of CFI-2-S to "i-th demand", make it and the text

8.6.3 The same content in Table 13 is consistent in the expression;

--- Removed references that are duplicated with normative references;

--- References added "ISO 9241-110:2006 Ergonomics of human-system interaction" referenced by 8.6.3 Note 2

teraction-Part 110. Dialogueprinciples".

Introduction

This part of GB/T 25000 provides a set of measures for the quality characteristics of use (defined in GB/T 25000.10).

Degree (in combination with GB/T 25000.30) is used to specify the quality requirements for use, and (in combination with GB/T 25000.40 and GB/T 25000.41)

Used to measure and evaluate the quality of use.

This section selects quality measures based on practical value. These measures are based on existing practices (eg, Ref. [10]). This

These measures are not comprehensive and detailed, and users of this section are encouraged to improve them when necessary.

Figure 1 Relationship between SQuaRE quality measurement standards

Figure 1 depicts the relationship between GB/T 25000.22 and other SQuaRE quality measurement standards.

a) GB/T 25000.20---Measurement Reference Models and Guidelines. Provide reference models and guidelines for measuring quality characteristics;

b) GB/T 25000.21---Quality measure element. Provides a format for specifying the elements of the quality measure and can be used for construction

Several examples of quality measurement elements for building software quality measures;

c) GB/T 25000.22---Use quality measurement. provide measures, including correlation measurements using quality characteristics in the mass model

function;

d) GB/T 25000.23---System and software product quality measurement. provide measures, including quality characteristics in the product quality model

Associated measurement functions and quality measure elements;

e) GB/T 25000.24---Data quality measurement. Provides measures, including associated measurement functions for quality characteristics in the data quality model

Number and quality measure elements.

System and software engineering

System and Software Quality Requirements and Evaluation (SQuaRE)

Part 22. Using quality measurements