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

GB/T 25000.40-2018

Replacing GB/T 18905.1-2002

**Systems and software engineering -- Systems and software
Quality Requirements and Evaluation (SQuaRE) -- Part 40:
Evaluation process**

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Foreword

GB/T 25000 "System and Software Engineering Systems and Software Quality Requirements and Evaluation (SQuaRE)" has been or is planned to release the following section.

- 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 easy recovery;
- 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 40th 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 18905.1-2002 "Software Engineering Product Evaluation Part 1. Overview". This part and GB/T 18905.1-

The main technical changes in 2002 are as follows.

- Revised terms and definitions, including. demand side (see 4.1, 2002 version 4.1), attributes (see 4.3, 2002 version 4.2), developers (see 4.12, 2002 edition 4.4), implied requirements (see 4.29, 2002 edition 4.10), indicators (see 4.31, 2002 edition 4.11), dimension Protector (see 4.37, 2002 version 4.16), measure (see 4.38, 2002 version 4.18), measurement (see 4.39, 2002 version 4.19);
- Added terminology, including. analytical model (see 4.2), information needs (see 4.32), information products (see 4.33), information system requirements (see 4.34), intermediate software product requirements (see 4.36), measurement functions (see 4.41), measurement methods (see 4.42), measurement procedures (see 4.43);
- Added technical content, including. reference model overview (see 5.1), role (see 5.3), quality in the life cycle (see 5.4), evaluation Support (see 5.5), general requirements (see 6.1), document editing (see 6.2), and end evaluation (see 6.7);
- Modified the technical content of the evaluation process. See the difference between this part and the evaluation process in GB/T 18905.1-2002.

Appendix A.

This part adopts the redrafting method to modify the ISO /IEC 25040.2011 system and software engineering system and software quality requirements.

And evaluation (SQuaRE) evaluation process.

The structural differences and reasons for this part and ISO /IEC 25040.2011 are as follows.

- Due to the required clauses in the suspension section of ISO /IEC 25040.2011, for the standardization of expression, 6.3, 6.4, 6.5,

The suspension section containing the required clauses at the beginning of 6.6 and 6.7 is amended to be the original chapter of 6.3.1, 6.4.1, 6.5.1, 6.6.1, 6.7.1.

Sort order

--- Adjust the appendix number in the order in which it appears first.

The technical differences and reasons for this part and ISO /IEC 25040.2011 are as follows.

--- Regarding the normative reference documents, this section has made technical adjustments to maintain the national standard with GB/T 25000 series.

Quasi-coordination and adjustments are concentrated in Chapter 3, "Regulatory References". The specific adjustments are as follows.

* Increased references to GB/T 18905.6-2002, GB/T 25000.2, GB/T 25000.10, GB/T 25000.40,

GB/T 25000.41, ISO /IEC 15026.1998, ISO /IEC 25020, ISO /IEC 25021, ISO /IEC 25022, ISO /IEC 25023, ISO /IEC 25030, ISO /IEC 12207, ISO /IEC 15288.

--- Corrected the error in the international standard, "software product quality evaluation process" was changed to "software product quality reference model", and

The content has been re-described (see 5.1).

The editorial differences between this section and ISO /IEC 25040.2011 are as follows.

--- Modified the content stated in the introduction. The preface of ISO /IEC 25040.2011 mainly introduces the standard development unit.

And the history of standards. The introduction to this section mainly introduces the main contents of each part of the GB/T 25000 series of standards;

--- In order to coordinate with the GB/T 25000 series of national standards, the name of the international standard was revised;

--- Added Appendix A (informative appendix) "Compared with the evaluation process in GB/T 18905.1-2002" and adjusted the original appendix

Numbering.

Introduction

As the use of information technology continues to grow, so does the number of critical computer systems. These systems include. confidentiality, life, economy

And key systems for security. The software quality of these systems is especially important because software failure can have serious consequences.

Evaluation is a systematic determination of the extent to which an entity meets its stated criteria. Software product quality evaluation is critical to software acquisition and development

important. The relative importance of various features of software quality depends on the

intended use or target of the software portion of the system; the software product needs to be evaluated

Price to determine whether the relevant quality characteristics meet system requirements.

This section contains general requirements for the evaluation of software product quality, as well as the related general concepts.

The overall goal of the ISO /IEC 25000SQuaRE international standard set is to create a logically organized, rich and unified system.

The column standard covers two main processes. software quality requirements specifications and software quality evaluations supported by the software quality measurement process.

The purpose of the ISO /IEC 25000SQuaRE International Standards Set is to help those who develop and acquire software with quality requirements specifications and evaluations.

People of the product. The standard set establishes software product quality requirements specifications and measurements, as well as evaluation criteria, including

The process attribute matches the quality model defined by the customer quality. In addition, this series of standards provides the use of developers, buyers and evaluators.

Recommended measure of software product quality attributes.

ISO /IEC 25000SQuaRE provides.

- a) terms and definitions;
- b) a reference model;
- c) a general guide;
- d) separate divisional guidelines;
- e) Standards suitable for demand specification, planning and management, measurement and evaluation purposes.

ISO /IEC 25000SQuaRE includes international standards for quality models and measures, as well as quality requirements and evaluation.

ISO /IEC 25000SQuaRE replaces the current ISO /IEC 9126 series of standards and the ISO /IEC 14598 series of standards.

This section is intended to work with other parts of the SQuaRE series of international standards, as well as the ISO /IEC 14598 series of standards and ISO /IEC 9126.

The series standards are used together until they are replaced by the ISO /IEC 25000 series of standards.