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PEOPLE'S REPUBLIC OF CHINA**

GB/T 25000.12-2017

**Systems and software engineering -- Systems and software
Quality Requirements and Evaluation (SQuaRE) -- Part 12: Data
quality model**

(English Translation)

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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 model;
- Part 12. Data Quality Model;
- Part 20. Measurement reference model and guidelines;
- Part 21. Quality measurement elements;
- Part 22. Use of 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 evaluators;
- Part 42. Evaluation module;
- Part 45. Recoverability of the evaluation module;
- Part 51. Quality requirements and test rules for ready-to-use software product (RUSP);
- Part 60. Ease of use test report Common Format for Industry (CIF). Common Framework for Ease of Use related information;
- Part 62. Usability test report industry common format (CIF);
- Part 63. Industry Common Format for Ease of Use (CIF).
- Part 64. Common Format for Industrial Ease of Use (CIF). User Requirements Report;
- Part 65. Common Industrial Formats for Ease of Use (CIF). Specification of user requirements;
- Part 66. Common Format (CIF) for Ease of Use. Evaluation Report.

This part is the 12th part of GB/T 25000.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses redrafted law revision using ISO/IEC 25012:2008 "software engineering software product quality requirements and evaluation (SQuaRE) Data Quality Model ", the main technical differences compared with ISO/IEC 25012:2008 are as follows.

--- On the normative references, this section made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- Replace ISO/IEC 25000 with GB/T 25000.1-2010 that uses the same international standard.

--- In order to maintain the terminology and ISO/IEC 25024:2015 "Systems and software engineering systems and software quality requirements and evaluation (SQuaRE) data quality measurement "consistency, with reference to ISO/IEC 25024:2015 for this section 4.1, 4.2, 4.7, 4.10,4.14 revised.

This section made the following editorial changes.

--- According to the latest SQuaRE series of international standards norms, with reference

to ISO/IEC 25024:2015 Introduction to SQuaRE A series of international standards introduced was revised.

--- According to the latest SQuaRE series of international standards, this part of the standard name has been modified.

Please note that some of this document may be patentable. The issuing agencies of this document do not bear the responsibility of identifying these patents.

This part of the National Information Technology Standardization Technical Committee (SAC/TC28) and focal point.

This part of the drafting unit. Wanda Information Co., Ltd., Fudan University, China Merchants Bank Co., Ltd., Dongguan City, Yakang Precision Machinery Co., Ltd., Foshan Covey Optoelectronics Co., Ltd., Zhuhai Li Zhun Electronic Technology Co., Ltd., China Electronics Standardization Institute, China Mobile (Shenzhen) Co., Ltd., National Application Software Product Quality Supervision and Inspection Center, Shanghai Computer Software Technology Development Center, Shanghai Hong Di Information Technology Co., Ltd., CMB Silver Cloud (Shenzhen) Information Technology Co., Ltd., Shanghai Software Testing Center Co., Ltd., Chongqing Software Review Test Center Co., Ltd., Sichuan Province Software and Information System Engineering Evaluation Center, Zhejiang Province, the inspection of electronic information products, Hubei Software Review Heart, Fujian Provincial Supervision and Inspection of Electronic Products, Jilin Province Institute of Electronic Information Products Supervision and Inspection.

Introduction

The amount of data and information processed by computer systems is growing worldwide; data quality is the quality of the information derived from these data and the key element of usefulness, most business processes rely on data quality.

A common prerequisite for all information technology projects is that between the computer system and the user and between the computer systems themselves the quality of the data exchanged, processed and used.

It is important to manage and improve data quality because of this.

- Obtaining data from an organization of unknown or poor quality in the data production process;

--- There are flawed data, resulting in unsatisfactory information, useless results and customer dissatisfaction;

--- This data spread between different owners and users, according to a single organization's workflow needs to obtain the data often lack of A consistent and integrated view necessary to ensure interoperability and cooperation;

--- Need to deal with due to semantic ambiguity or lack of consistency with other existing relevant data can not be directly reused data;

--- legacy architecture and the coexistence of computer systems, these computer systems included in different periods, according to different standards and design the present distributed system;

--- Existing information systems (such as the World Wide Web) data changes frequently, the integration has become a particularly important issue.

The data quality model as defined in this section is designed to meet these requirements and takes into account that data life cycles are generally more than software life cycles long. This data quality model can be used in the following example aspects.

- Define and evaluate data quality requirements in data production, acquisition, and integration;

--- Identify data quality assurance guidelines, but also conducive to data reengineering, assessment and improvement;

--- Evaluation of data and legal and (or) compliance requirements.

Detecting errors or inefficiencies caused by data brings improvements and corrective interventions for other components of the system in which the data and data reside, Here is an example.

--- Data (such as redesigning, analyzing, arranging, adding, converting, matching);

--- Software (for example, modify the source code to achieve consistency of control);

--- Hardware (eg upgrade computer system to improve response time);

--- human business processes (such as training of users to avoid errors in the data entry process; improve the accounting data management).

The data quality model as defined in this section is intended for use with other standards in the SQuaRE family of standards.

Figure 1 SQuaRE series of international standards organizations

The SQuaRE series of international standards consists of five main and expansion divisions, as shown in Figure 1 (rewritten from ISO/IEC 25000.

2005). An overview of each division in the SQuaRE series of standards is as follows.

--- ISO/IEC 2500n --- Quality Management Division. The standards that make up this division are defined by the SQuaRE series of standards There are all the common models, terms and definitions referenced by other standards. This division also provides for planning and managing a project Needs and guidelines.