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PEOPLE'S REPUBLIC OF CHINA**

GB/T 29832.3-2013

Reliability of system and software -- Part 3: Testing method

系统与软件可靠性 第3部分：测试方法

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Foreword

GB/T 29832 "System and Software Reliability" is divided into three parts as follows.

- Part 1. Index System;
- Part 2. Measurement Methods;
- Part 3. Test methods.

This is Part 3 GB/T 29832 of.

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

This part of the National Information Technology Standardization Technical Committee

(SAC/TC28) and focal points.

This section is drafted. Shanghai computer software technology development center, Zhuhai Southern Software Testing Center, China Electronics Standards Institute of Shenzhen Technology Co. Angola measurement standards, Beijing University of Posts and Telecommunications, Shanghai Pudong Software platform Ltd., Shanghai Baosight Co., Ltd., Shanghai Lu Qixin Information Technology Co., Ltd., Henan Electric Power Research Institute.

Introduction

This section GB/T 29832 for testing the reliability of measurement are described, the concrete steps or corresponding method, Easy for users to operate or reviewers.

The method set forth in this section is not a complete set, is still exploring new methods not included. Reliability testing personnel from in this section select the appropriate method for single or multiple combinations of methods for measuring the reliability of the system under test quality situation; to be Modify or use other methods not covered in this section.

This section applies to a variety of computer software products and related systems with reliability requirements, but not every method is suitable for all kinds of meter Computer software products and related systems, and in this section assumes that the tested software and related systems have been running for some time, it has been subjected to function Test.

The main users of this standard is expected to include.

- a) the demand side (obtained from the supplier or procurement system, software product or software service individual or organization);
- b) the evaluator (individual or organization to implement the evaluation);
- c) the supplier (the contract provided by the system, organization or individual software product or software service to the acquirer), which is indeed the eligibility test when using recognized software quality.

GB/T 29832.1 "Systems and Software Reliability - Part 1. Indicator System" gives the reliability index system, GB/T 29832.2 "Systems and Software Reliability - Part 2. Measurement Methods" shows how to obtain the reliability index measurements measure. This section aims in conjunction with the GB/T 29832.1 and GB/T 29832.2.

Systems and Software Reliability Part 3. Test methods

1 Scope

This section GB/T 29832 specifies how to get the reliability index measurements of test methods.

This section applies to reliability testing and evaluation of system reliability requirements and software.

NOTE: The system referred to in this section are primarily software system.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 11457 software engineering terminology Part of GB/T 29832.1 Systems and Software Reliability 1. Indicator System GB/T 29832.2 Systems and Software Reliability - Part 2. Measurement Methods

3 Terms and Definitions

Terms and definitions GB/T 11457 and GB/T 29832.1, as defined in this document apply.

4.1 Test Method

Test method comprising.

Expert Evaluation Method --- a subjective evaluation method. When the assessment should be reviewed in accordance with the object and purpose of design review project evaluation tables, columns, the scoring column, scores, weights, and scoring rules. N may be composed of a expert review group, according to their own expert experience and cognition Analyzing scoring. Then, based on the weight of the right experts and statistical rules score summary calculations, the calculated value as a result of the review. fight Sub-rule can be hierarchical, it can also be a range of values, or select one of the other appropriate rules;

Technical testing method --- an objective evaluation method. When testing technology, can automatically select the appropriate test based on the measured object and purpose Based testing tool, but also by doing manual testing. The results obtained in testing technology is often the result of a quantitative measurement;

Mathematical calculations --- a use of a mathematical model to calculate the testing methods. When the assessment should be based on the measured object and purpose of the test is selected Choose suitable mathematical model, and then calculate the final value obtained as a result of the evaluation;

--- One kind of user survey questionnaire sought methods for specific user groups. When a user survey, and it should be based on the specific purpose of the survey Users design the questionnaire, so that respondents fill out and feedback. The number of recovered questionnaire should reach a certain number, not less than the number issued Appropriate proportion. Then, the collected questionnaires aggregate calculations, the calculated value

as a result of user surveys.

4.2 Test procedure

General reliability testing process may include reliability testing requirements analysis, functional cross-sectional configuration, test case design, test scenarios design, Test environment and tools ready, reliability test implementation, data collection and analysis, fault tracing and other sectors, as shown in FIG. The main process equipment Body described in Appendix A.