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Systems and software engineering - Functional size measurement - FiSMA 1.1 method

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Table of Contents

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.

This document is identical to ISO /IEC 29881.2010 "Information Technology Software and System Engineering FiSMA1.1 Functional Scale Measurement Method

Law".

The following minimal editorial changes have been made to this document.

---In order to be consistent with the existing standards, the name of the standard is changed to "System and Software Engineering Functional Scale Measurement FiSMA1.1 Method

Law";

--- For the convenience of readers to understand and use, add Appendix NA (informative).

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

Functional size is an essential measure when comparing software development activities and alternatives. In addition to estimating size and

In addition to analyzing productivity, functional scale has been proven useful for planning, tracking, controlling, and contracting projects. Because functional size measurement

For end users, FSM can also make scope management and change management more efficient, more reliable and easier to understand.

Under similar environmental conditions, technical conditions, and quality requirements,

calculations can be evaluated based on the correlation between functional scale and workload.

The accuracy of the parameters can be used to evaluate the usefulness of the FSM method. Such an assessment may indicate the need to justify the calculation parameters used to derive the functional size.

1.1, FiSMA 1.1) is a general, parametric FSM approach applicable to all software types. FiSMA1.1 is tested by Finnish software

From.1997 to.2003, more than 600 software development projects were measured with this method.

The current limit value of the counting parameter used by FiSMA1.1 is obtained from its predecessor experience 2.0FPA, which has been statistically confirmed to be accurate

sex. Updates may be made in future versions of the FiSMAFSM method if data collection and analysis prove necessary.

If the source data are collected to the recommended level of detail, the results obtained by FiSMA1.1 and Empirical2.0FPA are largely

Interchangeable.

FiSMA1.1 method is completely based on user functional requirements (FUR). User requirements can be grouped into functional (what tasks the software performs)

tasks) and non-functional (how the software must perform tasks, including quality requirements). For the FiSMA1.1 method, the measurement object is

User functional requirements. Some FSM methods are process-oriented, while FiSMA1.1 is service-oriented. A process-oriented approach requires identifying

All functional processes supported by the software. In contrast, a service-oriented approach (such as the FiSMA1.1 approach) needs to recognize that the software provides

all the different services offered.

The FiSMA1.1 relationship chain of users and developed software segments involves user needs and services as shown in Figure 1.

Figure 1 Relationship between users and software segments

Every reader of this document can understand sizing measurements for their own reasons, but the typical user perspective is estimating work for a software project

quantity. Other important industry applications of FSM are shown in Figure 2.

Figure 2 Common purposes of functional size measurement

This document takes operability as the basic starting point for consideration, and an

informative appendix NA "Application Cases of this Document" is added to ensure that this document

The software can be instructive in actual use.

System and software engineering functional size measurement

FiSMA1.1 method

1 Scope

This document specifies the definitions, conventions and activities of the FiSMA1.1 methodology.

This document is intended for those who use the FiSMA 1.1 method to measure the functional size of software. The FiSMA1.1 method is designed to provide

Use by personnel related to software acquisition, development, use, support, maintenance, and auditing. FiSMA1.1 method to assess user functional requirements

Based on this, the functional scale of the software segment is measured from the user's perspective.

1.1 Fields of application of the FiSMA1.1 method

The FiSMA1.1 method is suitable for measuring software in any functional domain.

1.2 Limitations of the FiSMA1.1 method

The FiSMA1.1 method has no limitations in the type or quality of the software being measured.

1.3 FSM scope of FiSMA1.1 method

The functional size measurement range of the FiSMA1.1 method depends on the purpose of the measurement software. When using the FiSMA1.1 method, the covered

Various user functional requirements depend on the counting purpose and may therefore include user functional requirements for a software segment or a group of software segments. in the van

Each software segment within the scope must be measured separately. If there is more than one software segment in a project, it is necessary to accumulate all the functional specifications of the software.

mold. The scope of an FSM instance is often a subset of the overall user requirements, including only the user functional requirements, that is, the services that the software must perform.

tasks and tasks. The purpose of the FSM determines the user functional requirements that the FSM instance will include.

Note 1.If the purpose of FSM is to determine the size of the first release of the software segment, then the scope of use of the FiSMA1.1 method includes only the first release of the software segment.

User functional requirements.

Note 2.If the purpose of the FSM is to determine the supported size of an installed software package, then the FSM instance only includes the

User functional requirements.

Note 3.The FiSMA1.1 method only measures the scale of user functional requirements within the above range.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

ISO /IEC 14143-1.2007 Information Technology Software Measurement Functional Size Measurement Part 1.Concept Definition

of concepts)

Note. GB/T 18491.1-2001 Information Technology Software Measurement Functional Scale Measurement Part 1.Concept Definition (ISO /IEC 14143-1.

1998, IDT)

3 Terms and Definitions

The terms and definitions defined in ISO /IEC 14143-1.2007 and the following apply to this document.