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**Systems and software engineering - Functional size
measurement - COSMIC method**

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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 equivalent to ISO /IEC 19761:2011 "Software Engineering COSMIC: A Functional Size Measurement Method":

This document adds a chapter "Normative References":

This document has made the following minimal editorial changes:

---In order to coordinate with the existing standard documents, the name of the standard is changed to "COSMIC method for system and software engineering functional scale measurement

Law";

--- Added Appendix NA (informative) "Application Cases of this Document":

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

In order to standardize the quantitative evaluation of software in my country and reduce the differences brought about by different scale measurement methods as much as possible, it is necessary to measure the software scale:

The calculation method is standardized:

Software investment is an important part of many business budgets: Organizations recognize the importance of controlling software costs, analytics in software development and maintenance

The importance of performance against budgets for investment in the field of care in order to compare with industry benchmarks in the field: To do this, it is necessary to measure and apply these

Quantitative model:

Corresponding measurements are needed when analyzing the quality and productivity of software development and maintenance work: On the one hand, from the developer's point of view

See, the technical performance of a product or service requires technical measurements to quantify: These technical measures can be used for efficiency analysis, such as improving software design

Calculation efficiency: On the other hand, quantifying the performance of a product or service from the perspective of the user or owner requires functional measures such as productivity analysis:

analysis: Functional measurements must be independent of the choice of technical means of development and implementation: Only then can these functional measurements be used to compare

Comparing productivity when using different methods and techniques:

System and software engineering functional size measurement

COSMIC method

1 Scope

This document specifies a collection of definitions, conventions and activities for the COSMIC functional size measurement methodology:

This document applies to the measurement of software function scale in the following fields:

a) application software;

Example 1: Banking, insurance, accounting, personnel, purchasing, distribution or manufacturing:

b) real-time software;

Example 2: Software for telephone exchange and information exchange, embedded in equipment to control devices such as household appliances, elevators, and automobile engines, for process control and automation

Dynamic data acquisition, as well as the real-time control part of the software in the computer operating system:

c) Software combining the above two types:

Example 3: A real-time reservation system for flights or hotels:

This document does not apply to functional size measurements of the following types of software segments or parts thereof:

---Software that uses complex mathematical algorithms or other complex professional rules, such as: expert systems, simulation software, self-learning software and weather forecasting system;

---Software that processes continuous variables such as audio, sound or video images, such as: computer game software, music processing software, etc:
software:

2 Normative references

This document has no normative references:

3 Terms and Definitions

The following terms and definitions apply to this document:

3:1

The basic unit of the user's functional requirements:

[Source: ISO /IEC 14143-1:2007, 3:1]

3:2

A defined class of base features:

[Source: ISO /IEC 14143-1:2007, 3:2]

3:3

boundary boundary

The conceptual interface between the software being measured and the functional user: