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

系统与软件工程 功能规模测量 IFPUG方法

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Foreword

This document was issued on 17 March 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 October 2023.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

It is classified under ICS 35.080, Chinese classification L77.

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 20926.2009 "Software and System Engineering Software Measurement IFPUG Functional Scale Measurement Method 2009".

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

--- In order to coordinate with the existing standard documents, the name of the standard is changed to "IFPUG Method for Measuring Functional Scale of System and Software Engineering";

--- 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.

This document is proposed and managed by the National Information Technology Standardization Technical Committee (SAC/TC28).

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Introduction

In order to effectively support the landing and implementation of GB/T 18491 "Information Technology Software Measurement Function Scale Measurement", define a

The functional size measurement method of GB/T 18491 is formulated in this document.

Since the mid-1970s, the method of measuring the functional size of software in function points has grown from a few interest groups to

For an impressive global organization. Alan Albrecht was the first to publicly publish a measure of software size

People, this method is called the function point counting method. With the increase of the use of function points, the application and use of this method are becoming more and more extensive. since

Albrecht's software function classification method. The functional size measurement methodology defined in this document facilitates a consistent solution to functional size measurements.

release. The measurement method of the IFPUG functional scale is also called the function point counting method, and the unit of its functional scale is called the function point.

Organizations can apply this document to measure the size of software products for.

- Support quality and productivity analysis;
- Estimate the cost and resources required for software development, enhancement and maintenance;
- Provide a normalization factor for software comparison;
- Determine the size of the purchased application package by grading all the functions contained in the application package;
- Help users determine the benefits of an application package to their organization by determining the functional size specific to their needs.

Function point analysis measures software by quantifying the tasks and services (i.e., functions) it provides to users based primarily on its logical design. Function

The purpose of point analysis is to measure.

- Functions requested and received by users implemented in the software;
- Does not depend on the implementation of its technology to measure the scale of software development and maintenance.

The process of function point analysis is.

- Simple enough to minimize the cost of the measurement process;
- Measurements are consistent across projects and organizations.

System and software engineering functional size measurement

IFPUG method

1 Scope

GB/T 42449-2023 covers the IFPUG method of functional size measurement - the definitions, the rules and the procedures for expressing the size of software in function points, counted from the functions the software delivers to its users rather than from the way it was built. The document is equivalent to ISO/IEC 20926:2009 and gives the framework of GB/T 18491 a measurement method that can actually be applied. Most of its weight sits in two clauses: the terms and definitions, which carry the counting concepts the method rests on, and the measurement process, which sets out the steps of a count in the order they are performed, with a short abbreviations clause between them. The reason for such detailed rules is repeatability. Size expressed in lines of code says as much about the language and the programmer as about the work done, so it cannot be used to compare projects, price a contract or track productivity across a portfolio. A function point count is worth only as much as the consistency of the rules behind it, which is why the definitions and the procedure are fixed here instead of being left to the judgement of whoever is counting. Used by measurement practitioners, software suppliers estimating or pricing work, and the bodies that audit or benchmark them.

1.1 Purpose

This document specifies the definitions, rules and procedures for the IFPUG Functional Size Measurement (FSM) method.

1.2 Consistency

This document follows the provisions in ISO /IEC 14143-1.2007.

1.3 Applicability

This document applies to all functional areas.

Note. The IFPUG organization continues to publish white papers to provide guidance for evolving environments and fields.

This document is fully compatible with previous versions of the IFPUG scale measurement method.

IFPUG function point analysts have identified different delivery rates (time to deliver a single function point) that differ from those in

related to applications built in functional areas calibrated for different project sizes and software complexities.

1.4 Users

This document is intended for any user who needs to measure the size of a function. For experienced users, this document provides a useful reference.