
**Software and systems engineering —
Software measurement — IFPUG
functional size measurement
method 2009**

*Ingénierie du logiciel et des systèmes — Mesurage du logiciel —
Méthode IFPUG 2009 de mesurage de la taille fonctionnelle*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 20926 was prepared by the International Function Point Users Group (IFPUG) and was adopted, under the PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

This second edition cancels and replaces the first edition (ISO/IEC 20926:2003), which has been technically revised.

Introduction

The use of function points, as a measure of the functional size of software, has grown since the mid 1970s from a few interested organizations to an impressive list of organizations worldwide. Allan Albrecht was the first to publicly release a method for functionally sizing software called function point analysis. With the growth in the use of function points, there has been wider application and use of the measure. Since its formation in 1986 the International Function Point Users Group (IFPUG) has continuously enhanced the original Albrecht method for functionally sizing software. This International Standard is the latest release in the continually improving IFPUG method that promotes the consistent interpretation of functional size measurement in conformance with ISO/IEC 14143-1:2007. The IFPUG functional size measurement method is known as function point analysis and its units of functional size are called Function Points.

Organizations can apply this International Standard to measure the size of a software product to:

- support quality and productivity analysis;
- estimate cost and resources required for software development, enhancement and maintenance;
- provide a normalization factor for software comparison;
- determine the size of a purchased application package by functionally sizing all the functions included in the package;
- assist users in determining the benefit of an application package to their organization by functionally sizing functions that specifically match their requirements.

Function point analysis measures software by quantifying the tasks and services (i.e., functionality) that the software provides to the user based primarily on logical design. The objectives of function point analysis are to measure:

- functionality implemented in software, that the user requests and receives;
- functionality impacted by software development, enhancement and maintenance independently of technology used for implementation.

The process of function point analysis is:

- simple enough to minimize the overhead of the measurement process;
- a consistent measure among various projects and organizations.

In order to effectively apply this International Standard, persons can be formally trained in the method using IFPUG certified course materials.

This International Standard is one component in the IFPUG publications. It is recommended that it be read in conjunction with the other IFPUG publications. These provide guidance to application of the rules specified within this International Standard and background information to aid in understanding the use and applicability of the resulting functional size. Supporting IFPUG publications include the following:

- the current version of the IFPUG Counting Practices Manual, which incorporates this International Standard supplemented with counting practices and examples that support its implementation;

- “Framework for Functional Sizing”, 2005, which discusses the contribution of both functional size and non-functional size to the overall software product size; the IFPUG FSM method is a method for measuring the functional size;
- IFPUG website at www.ifpug.org.

Software and systems engineering — Software measurement — IFPUG functional size measurement method 2009

1 Scope

1.1 Purpose

This International Standard specifies the set of definitions, rules and steps for applying the IFPUG functional size measurement (FSM) method.

1.2 Conformity

This International Standard is conformant with all mandatory provisions of ISO/IEC 14143-1:2007.

1.3 Applicability

This International Standard can be applied to all functional domains.

NOTE IFPUG continues to publish white papers providing guidelines for use in evolving environments and domains.

This International Standard is fully convertible to prior editions of IFPUG sizing methods.

IFPUG function point analysts have identified different delivery rates (hours to deliver a function point) related to building applications in different functional domains calibrated for varying project sizes and software complexities.

1.4 Audience

This International Standard can be applied by anyone requiring a measurement of functional size. Persons experienced with the method will find this International Standard to be a useful reference.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 14143-1:2007, *Information technology — Software measurement — Functional size measurement — Part 1: Definition of concepts*