AS/NZS ISO/IEC 14143.6:2006

Australian/New Zealand Standard™

Information technology—Software measurement—Functional size measurement

Part 6: Guide for use of ISO/IEC 14143 series and related International Standards

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Australian Computer Society
Australian Electrical and Electronic Manufacturers Association
Australian Society or Technical Communications
Australian Software Metrics Association
Engineers Australia/ACTS Joint Board in Software Engineering
Griffith University
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-015, Software and Systems Engineering.

The objective of this Standard is to provide Functional Size Method users with a guide as to how the 14143 series Standards and other functional size measurement Standards and Technical Reports relate to each other and how to use them.

This Standard is identical with, and has been reproduced from ISO/IEC 14143-6:2006, *Information technology—Software measurement—Functional size measurement*—Part 6: *Guide for use of ISO/IEC 14143 series and related International Standards*.

As this Standard is reproduced from an international standard, the following applies:

(a) Its number appears on the cover and title page while the international standard number appears only on the cover.

(b) In the source text 'this part of ISO/IEC 14143' should read 'this Australian/New Zealand Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard ISO/IEC		*Australian/New Zealand Standard* AS/NZS	
14143	Information technology—Software measurement—Functional size measurement	14143	Information technology—Software measurement—Functional size measurement
14143-1	Part 1: Definition of concepts	14143.1	Part 1: Definition of concepts
14143-2	Part 2: Conformity evaluation of software size measurement methods to ISO/IEC 14143-1:1998	14143.2	Part 2: Conformity evaluation of software size measurement methods to AS/NZS 14143.1:1999
14143-3	Part 3: Verification of functional size measurement methods	14143.3	Part 3: Verification of functional size measurement methods
14143-4	Part 4: Reference model	14143.4	Part 4: Reference model
14143-5	Part 5: Determination of functional domains for use with functional size measurement	14143.5	Part 5: Determination of functional domains for use with functional size measurement
19761	Software engineering—COSMIC-FFP—A functional size measurement method	19761	Software engineering— COSMIC-FFP—A functional size measurement method
20296	Software engineering—IFPUG 4.1 Unadjusted functional size measurement method—Counting practices manual	20296	Software engineering—IFPUG 4.1 Unadjusted functional size measurement method—Counting practices manual
20968	Software engineering—Mk II Function Point Analysis—Counting Practices Manual	20968	Software engineering—Mk II Function Point Analysis—Counting Practices Manual

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24570	Software engineering—NESMA functional size measurement method version 2.1—Definitions and counting guidelines for the application of Function Point Analysis	24570	Software engineering—NESMA functional size measurement method version 2.1—Definitions and counting guidelines for the application of Function Point Analysis

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

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INTRODUCTION

Functional Size Measurement (FSM) is a technique used to measure the size of software by quantifying the Functional User Requirements of the software. The first published method to embrace this concept was Function Point Analysis, developed by Allan J. Albrecht in the late 1970s. Since then, numerous extensions and variations of the original method have been developed. In the field of ISO/IEC International Standards, the following Functional Size Measurement-related International Standards and Technical Reports have been published:

— ISO/IEC 14143 series, parts 1 to 5,

— ISO/IEC 19761:2002,

— ISO/IEC 20926:2002,

— ISO/IEC 20968:2002, and

— ISO/IEC 24570:2004.

This part of ISO/IEC 14143 was established to provide FSM Method users and developers with a guide as to how these International Standards and Technical Reports relate to each other and how to use them.

The Functional Size (FS) obtained by measuring a piece of software contributes to a better understanding of the characteristics of the software, as well as the development, maintenance and support activities thereof. The three types of International Standards and Technical Reports related to the definition and use of FS and/or Functional Size Measurement (FSM) are:

a) Concept Standards: Describe concepts and provide definitions;

b) Supporting Standards: Supply information to assist in the evaluation of Functional Size Measurement Methods (FSMM) and examples of the software domains that they measure; and

c) Method Standards: Define instances of FSMMs.

Any FSMM, other than the Method Standards, can be used to measure FS as long as it conforms to ISO/IEC 14143-1. FSMMs can vary in their capability to measure software in different domains. Therefore, before deciding on which FSMM to use, it is advisable to assess the capability of the method to adequately size the software to be measured.

This part of ISO/IEC 14143 provides guidance on how to select a suitable FSMM using all FSM-related International Standards.

The FS results obtained from applying the selected FSMM can be used for a variety of purposes throughout the life cycle of the software. This part of ISO/IEC 14143 also provides illustrative examples of how to use FSM and functional size to manage aspects of software development and maintenance.

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AUSTRALIAN/NEW ZEALAND STANDARD

Information technology — Software measurement — Functional size measurement —

Part 6:
Guide for use of ISO/IEC 14143 series and related International Standards

1 Scope

This part of ISO/IEC 14143 provides a summary of the FSM-related standards and the relationship between:

— the ISO/IEC 14143 series FSM framework International Standards that provide the definitions and concepts of FSM and conformance and verification of FSMMs, and

— the ISO/IEC standard FSMMs, i.e. ISO/IEC 19761, ISO/IEC 20926, ISO/IEC 20968 and ISO/IEC 24570.

This part of ISO/IEC 14143 also provides a process to assist users to select and develop an FSMM that meets their requirements as well as provides guidance on how to use FS. This part of ISO/IEC 14143 also gives guidance on how to use FS. FSMMs include, but are not limited to, ISO/IEC 19761, ISO/IEC 20926, ISO/IEC 20968 and ISO/IEC 24570.

NOTE An FSMM is a software sizing method that conforms to the mandatory requirements of ISO/IEC 14143-1. Recommending a specific FSMM is outside the scope of this part of ISO/IEC 14143.

The audiences of this part of ISO/IEC 14143 are:

— users and potential users of FSM; and

— developers of an FSMM.

2 Abbreviated terms

BFC Base Functional Component

FS Functional Size

FSM Functional Size Measurement

FSMM Functional Size Measurement Method

FUR Functional User Requirement

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3 FSM related standards (ISO/IEC 14143 series), FSMM standards, and their interrelationships

3.1 Outlines of FSM related standards

3.1.1 Overview

Function Point Analysis was established in the late 1970's. It has subsequently been used worldwide. Over time alternative methods have been derived and devised. Although these methods vary in the rules they use to measure software, they all focus on measuring FURs of software.

ISO/IEC 14143-1 defines concepts of FSM and FSMM. Subsequent parts of ISO/IEC 14143 (ISO/IEC 14143 series) have been developed to evaluate FSMMs.

The following clauses outline these FSM related standards.

NOTE For copies of the Scope clauses of the FSM related standards, refer to Annex A of this part of ISO/IEC 14143.

3.1.2 ISO/IEC 14143-1

ISO/IEC 14143-1 is a Concept Standard and is a basis for other International Standards and Technical Reports that are categorized as Supporting Standards and Method Standards.

This part of ISO/IEC 14143 is the foundation standard of the series and has the following contents:

a) Definitions

b) Characteristics of FSMMs

c) Requirements for FSMMs

d) Process for applying an FSMM

e) FSMM labelling conventions

ISO/IEC 14143-1 is an International Standard.

3.1.3 ISO/IEC 14143-2

ISO/IEC 14143-2 is a Supporting Standard.

This part of ISO/IEC 14143 defines processes to check conformity of a Candidate FSMM with ISO/IEC 14143-1. Using ISO/IEC 14143-2 is recommended whilst the conformity assessment can be done without using ISO/IEC 14143-2.

ISO/IEC 14143-2 has the following contents:

a) Evaluator characteristics

b) Inputs to conformity evaluation

c) Tasks and steps of the conformity evaluation procedure

d) Conformity evaluation outputs

e) Conformity evaluation result

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