

Australian/New Zealand Standard™

**Information technology—Software  
measurement—Functional size  
measurement**

**Part 3: Verification of functional size  
measurement methods**

### **AS/NZS ISO/IEC 14143.3:2004**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-015, Software and Systems Engineering. It was approved on behalf of the Council of Standards Australia on 14 May 2004 and on behalf of the Council of Standards New Zealand on 11 June 2004.  
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## PREFACE

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

This Standard is identical with, and has been reproduced from ISO/IEC TR 14143-3:2003, *Information technology—Software measurement—Functional size measurement, Part 3: Verification of functional size measurement methods*.

The objective of this Standard is to propose a framework for verifying the statements of an FSM Method and/or for conducting tests requested by the verification sponsor.

This Standard is Part 3 of AS/NZS ISO/IEC 14143, *Information technology—Software measurement—Functional size measurement*, which is published in parts as follows:

Part 1: Definition of concepts

Part 2: Conformity evaluation of software size measurement methods to AS/NZS 14143.1:1999

Part 3: Verification of functional size measurement methods (this Standard)

Part 4: Reference model

Part 5: Determination of functional domains for use with functional size measurement

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<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO/IEC		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

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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<sup>1</sup>. The first published method to embrace this concept was Function Point Analysis, developed by Allan Albrecht in the late 1970s. Since then, numerous extensions and variations of the original method have been developed. The end user may have many variants from which to choose - each with its own advantages in specific situations. This part of ISO/IEC 14143 was developed to provide a process to assist the user in choosing a method appropriate to their needs, by providing a process for verifying the extent to which statements made for certain performance properties of an FSM Method are true.

Tests are carried out according to the provisions of this Technical Report, concerning statements made for performance properties of a particular FSM Method. The results of these tests will be helpful to prospective users of the FSM Method in judging whether it is appropriate to their needs.

ISO/IEC 14143-1:1998 was developed to define the concepts of FSM and provides a basis against which all variants can be compared.

This part of ISO/IEC 14143

- a) establishes a framework for verifying certain performance properties of an FSM Method,
- b) defines several performance properties against which an FSM Method can be verified,
- c) describes the types of tests which can be performed,
- d) defines the process for verification of an FSM Method, and
- e) provides an example template for the verification report.

Verification is conducted by a verification team that has the competencies described in this part of ISO/IEC 14143. This part of ISO/IEC 14143 assumes familiarity with the concepts and definitions described in ISO/IEC 14143-1:1998.

The verification process is designed to meet the requirements of the verification sponsor and involves

- a) identifying the performance properties that need to be verified,
- b) identifying the tests that need to be conducted,
- c) conducting the tests, and
- d) reporting the verification test results.

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1) Refer ISO/IEC 14143-1:1998, *Information technology — Software measurement — Functional size measurement — Part 1: Definition of concepts*.

The output from the verification is the verification report, which provides objective evidence of the extent to which an FSM Method exhibits certain performance properties. The verification report consists of the results for each test carried out, and can be used to

- a) determine the correctness of the statements made by a particular FSM Method,
- b) determine the extent that a particular FSM Method exhibits the particular performance properties tested, and
- c) assist prospective users of the FSM Method to make informed decisions about which method best meets their needs.

NOTES

AUSTRALIAN/NEW ZEALAND STANDARD

# Information technology — Software measurement — Functional size measurement —

## Part 3: Verification of functional size measurement methods

### 1 Scope

This part of ISO/IEC 14143 establishes a framework for verifying the statements of an FSM Method and/or for conducting tests requested by the verification sponsor, relative to the following performance properties:

- repeatability and reproducibility;
- accuracy;
- convertibility;
- discrimination threshold;
- applicability to Functional Domains.

NOTE Statements and test requests relative to other performance properties are outside the scope of this document.

It aims to ensure that the output from the verification is objective, impartial, consistent and repeatable.

The verification report, produced as a result of applying this part of ISO/IEC 14143, will enable the prospective user to select the FSM Method which best meets their needs.

### 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 14143-1:1998, *Information technology — Software measurement — Functional size measurement — Part 1: Definition of concepts*

ISO/IEC 14143-2:2002, *Information technology — Software measurement — Functional size measurement — Part 2: Conformity evaluation of software size measurement methods to ISO/IEC 14143-1:1998*

ISO/IEC 14143-4:2002, *Information technology — Software measurement — Functional size measurement — Part 4: Reference model*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 14143-1:1998 and the following apply.