

Australian/New Zealand Standard™

**Information technology—Software
product evaluation**

**Part 6: Documentation of evaluation
modules**

[IEC title: Software engineering—Product evaluation—Part 6: Documentation
of evaluation modules]



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STANDARDS
NEW ZEALAND
Pūrongo Aotearoa

AS/NZS 14598.6:2001

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-015, Software Engineering. It was approved on behalf of the Council of Standards Australia on 15 October 2001 and on behalf of the Council of Standards New Zealand on 12 October 2001. It was published on 7 December 2001.

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First published as AS/NZS 14598.6:2001

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Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 4179 7

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-015, Software Engineering. This Standard is identical with and has been reproduced from ISO/IEC 14598-6:2001, *Software engineering—Product evaluation, Part 6: Documentation of evaluation modules*.

The objective of this Standard is to give suppliers, acquirers, and appropriate testing laboratories a definition of the structure and content of the documentation to be used to describe an evaluation module for use by other parts of this Standard.

This Standard is Part 6 of AS/NZS 14598, *Information technology—Software product evaluation*, which is published in parts as follows:

- Part 1: General overview
- Part 2: Planning and management
- Part 3: Process for developers
- Part 4: Process for acquirers
- Part 5: Process for evaluators
- Part 6: Documentation of evaluation modules (this Standard)

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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.

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

<i>Reference to International Standard</i>		<i>Australian or Australian/New Zealand Standard</i>	
ISO/IEC		AS/NZS	
9126	Information technology—Software product evaluation—Quality characteristics and guidelines for their use	4216	Information technology—Software product evaluation—Quality characteristics and guidelines for their use
12207	Information technology—Software life-cycle processes	ISO/IEC 12207	Information technology—Software life cycle processes
14598	Information technology—Software product evaluation	14598	Information technology—Software product evaluation
14598-1	Part 1: General overview	14598.1	Part 1: General overview
14598-5	Part 5: Process for evaluators	14598.5	Part 5: Process for evaluators
14598	Software engineering—Product evaluation		
14598-2	Part 2: Planning and management	14598.2	Part 2: Planning and management
14598-3	Part 3: Process for developers	14598.3	Part 3: Process for developers
14598-4	Part 4: Process for acquirers	14598.4	Part 4: Process for acquirers

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Introduction

Software product evaluation depends on a set of evaluation techniques and metrics that provide information about the quality characteristics of the software. Many metrics and associated methods for using the measurement results can be used for specific software product evaluation. ISO/IEC 9126-2 and ISO/IEC 9126-3 provide example metrics that correspond to one sub-characteristic. It is difficult to use these metrics consistently in an organisation. It may be necessary to develop new metrics for specific use. Therefore, it is necessary that a supporting function (see 14598-2) in the organisation specifies each metric for correct and consistent use within the organisation. The format for documenting a metric and associated methods, as well as guides for their use, should be standardised. The concept of an evaluation module provides a solution to this need.

An evaluation module specifies the evaluation methods applicable for evaluating a quality characteristic and identifies the evidence it needs. It also defines the elementary evaluation procedure and the format for reporting the measurements resulting from the application of the techniques.

A consistent way of documenting evaluation modules has a number of advantages:

- It provides a common reference in the description of the theoretical basis of evaluation modules.
- It identifies a minimal set of requirements for documenting and developing evaluation modules.
- It provides a necessary tool in collecting and cataloguing the large number of evaluation modules anticipated.

Evaluation modules provide a flexible and structured approach to making metrics applicable for evaluating intermediate and completed products. The use of evaluation modules produced according to this part of ISO/IEC 14598 helps to ensure that software product evaluations can be repeatable, reproducible and objective.

The format for documenting an evaluation module takes into account the following:

- It will be applied within the context of the evaluation of software products.
- The format supports the need for developing new metrics with respect to state of the art.
- The format provides a precise definition of metrics and their application.
- It provides the information needed for those who will use them for an evaluation.

Annex A provides guidance for the development process for new evaluation modules.

Annexes B, C and D are examples of evaluation modules.

AUSTRALIAN/NEW ZEALAND STANDARD

Information technology—Software product evaluation

Part 6: Documentation of evaluation modules

1 Scope

This part of ISO/IEC 14598 defines the structure and content of the documentation to be used to describe an Evaluation Module. Evaluation modules are intended to be used within the context of the ISO/IEC 9126 and the ISO/IEC 14598 multipart standards.

This part of ISO/IEC 14598 is intended to be used by experts in evaluation technology such as testing laboratories, research institutes and others when producing new evaluation modules.

2 Conformance

The documentation of an evaluation module conforms to this part of ISO/IEC 14598 if it meets the requirements of clause 6 (format for documentation of an evaluation module).

3 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 14598. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 14598 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 9126-1, *Software engineering — Product quality — Part 1: Quality model*.

ISO/IEC 12207, *Information technology — Software life cycle processes*.

ISO/IEC 14598-1, *Information technology — Software product evaluation — Part 1: General overview*.

ISO/IEC 14598-2, *Product evaluation — Part 2: Planning and management*.

ISO/IEC 14598-3, *Product evaluation — Part 3: Process for developers*.

ISO/IEC 14598-4, *Software engineering — Product evaluation — Part 4: Process for acquirers*.

ISO/IEC 14598-5, *Information technology — Software product evaluation — Part 5: Process for evaluators*.