AS/NZS 14756:2001
ISO/IEC 14756:1999

Australian/New Zealand Standard™

Information technology—Measurement and rating of performance of computer-based software systems

Standards Australia

STANDARDS NEW ZEALAND

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 18 January 2001 and on behalf of the Council of Standards New Zealand on 9 March 2001. It was published on 21 March 2001.

The following interests are represented on Committee IT-015:

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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 14756:1999, *Information Technology—Measurement and rating of performance of computer-based software systems*.

The objective of this Standard is to provide suppliers, acquirers, developers of software with a definition of user oriented performance values for computer-based software systems. These values are applicable to tests for all time constrained systems or system parts and include execution time, throughput and timeliness.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

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

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.

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

Reference to International Standard		*Australian/New Zealand Standard*	
ISO/IEC		AS/NZS	
14598	Information technology—Software product evaluation	14598	Information technology—Software product evaluation
14598-1	Part 1: General overview	14598.1	Part 1: General overview

CONTENTS

Page

Page

Page

NOTES

AUSTRALIAN/NEW ZEALAND STANDARD

Information technology – Measurement and rating of performance of computer-based software systems

Section 1: General

1 Scope

This International Standard defines how user oriented performance of computer-based software systems (CBSS) may be measured and rated. A CBSS is a data processing system as it is seen by its users, e.g. by users at various terminals, or as it is seen by operational users and business users at the data processing center.

A CBSS includes hardware and all its software (system software and application software) which is needed to realize the data processing functions required by the users or what may influence to the CBSS's time behaviour.

This International Standard is applicable for tests of all time constrained systems or system parts. Also a network may be part of a system or may be the main subject of a test. The method defined in this International Standard is not limited to special cases like classic batch or terminal-host systems, e.g. also included are client server systems or, with a broader comprehension of the definition of 'task', real time systems. But the practicability of tests may be limited by the expenditure required to test large environments.

This International Standard specifies the key figures of user oriented performance terms and specifies a method of measuring and rating these performance values. The specified performance values are those which describe the execution speed of user orders (tasks), namely the triple of:

- execution time,
- throughput,
- timeliness.

The user orders, subsequently called tasks, may be of simple or complex internal structure. A task may be a job, transaction, process or a more complex structure, but with a defined start and end depending on the needs of the evaluator. When evaluating the performance it is possible to use this International Standard for measuring the time behaviour with reference to business transaction completion times in addition to other individual response times.

The rating is done with respect to users requirements or by comparing two or more measured systems (types or versions).

Intentionally no proposals for measuring internal values, such as:

- utilisation values,
- mean instruction rates,
- path lengths,
- cache hit rates,
- queuing times,
- service times,