Australian/New Zealand Standard™

Information technology—CDIF framework

Part 1: Overview





AS/NZS ISO/IEC 15474.1:2003 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 6 May 2003 and on behalf of the Council of Standards New Zealand on 8 May 2003. It was published on 19 June 2003.

The following are represented on Committee IT-015:

Australian Computer Society Australian Information Industry Association Australian Society for Technical Communication (NSW) Australian Software Metrics Association Griffith University New Zealand Organisation for Quality Quality Society of Australasia Software Engineering Australia (QLD) Software Quality Association (ACT) Software Quality Association (NSW) Software Verification Research Centre Sydney SPIN Group (Software Process Improvement Network) Systems Engineering Society of Australia University of New South Wales University of South Australia University of Technology, Sydney

#### Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 03132.

# Australian/New Zealand Standard<sup>™</sup>

# Information technology—CDIF framework

# Part 1: Overview

First published as AS/NZS 15474.1:2003.

## COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

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 5286 1

### 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 15474-1:2002, *Information technology—CDIF framework*—Part 1: *Overview*.

The objective of this Standard is to introduce the CDIF family of standards and define the terms common to the CDIF family of standards.

This Standard is Part 1 of AS/NZS ISO/IEC 15474, *Information technology—CDIF framework*, which is published in parts as follows:

Part 1: Overview (this Standard)

Part 2: Modelling and extensibility

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 International Standard' should read 'this Australian/New Zealand Standard'.
- (c) A full point substitutes for a comma when referring to a decimal marker.

None of the normative references in the source document have been adopted as Australian or Australian/New Zealand Standards.

## CONTENTS

## Page

1	Scope	. 1
2	Conformance	. 2
3	Normative reference	. 2
4 4.1 4.2	Terms and definitions From ISO/IEC 13238-1 For this standard	. 3
5 5.1 5.2	Symbols (and abbreviated terms) Naming and diagramming notations Abbreviations	. 7
6	CDIF concepts and facilities	
6.1 6.2	Introduction Fundamental goals	
6.2.1	Extensibility	
6.2.2 6.3	Principle of maximum information transfer Architecture of CDIF	. 9
6.3.1	Framework	
6.3.2 6.3.3	Information content Transfer format	
6.4	CDIF family of standards	
6.4.1	Introduction	
6.4.2	Framework	-
6.4.3	Information content	
6.4.4	Transfer format	13
7 7.1	CDIF family of standards	14
7.2	Standards documents	
7.3	Frameworks	
7.3.1	Overview	
7.3.2 7.4	Modelling and extensibility Semantic metamodel standards	
7.4	Foundation subject area	
7.4.1	Common subject area	
7.4.3	Data definitions subject area	
7.4.4	Data models subject area.	
7.4.5	Data flow models subject area	
7.4.6	State/event models subject area	
7.5	Transfer format	
7.5.1	General rules for syntaxes and encodings	
7.5.2	Syntax SYNTAX.1	
7.5.3	Encoding ENCODING.1	17

	Page
Table of Illustrations	
Figure 1 – CDIF family of standards	1
Figure 2 – Use of the CDIF family of standards	8
Figure 3 – Multiple layers	9
Figure 4 – Architecture of CDIF	10
Figure 5 – Architecture of the CDIF family of standards	14

## AUSTRALIAN/NEW ZEALAND STANDARD

## Information technology — CDIF framework —

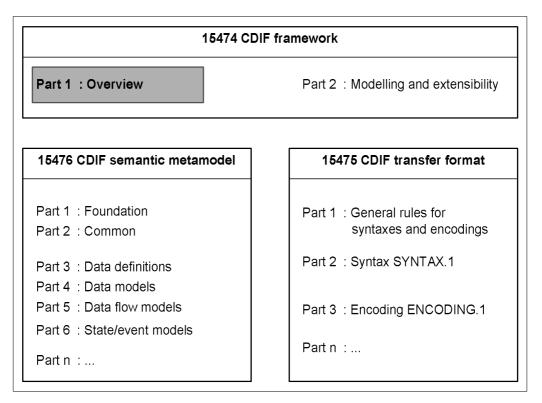
## Part 1: Overview

## 1 Scope

The CDIF family of standards is primarily designed to be used as a description of a mechanism for transferring information between modelling tools. It facilitates a successful transfer when the authors of the importing and exporting tools have nothing in common except an agreement to conform to CDIF.

The CDIF family of standards includes a semantic metamodel and a transfer format definition. It also includes the specification of a meta-metamodel and associated rules that define a framework for the semantic metamodel and the transfer format. The language that is defined for the transfer format also has applicability as a general language for Import/Export for repositories. The CDIF semantic metamodel also has applicability as the basis of standard definitions for use in repositories.

The diagram in Figure 1 depicts the various standards that comprise the CDIF family of standards. The shaded box depicts this Standard and its position in the CDIF family of standards.



#### Figure 1 – CDIF family of standards

This document introduces the CDIF family of standards and defines the terms common to the CDIF family of standards.