AS 10303.41—1998
ISO 10303-41:1994

Australian Standard™

Industrial automation systems and integration—Product data representation and exchange

Part 41: Integrated generic resources: Fundamentals of product description and support

This Australian Standard was prepared by Committee IT/6, Information Technology for Industrial Automation and Integration. It was approved on behalf of the Council of Standards Australia on 16 June 1998 and published on 5 September 1998.

The following interests are represented on Committee IT/6:

Association of Consulting Engineers Australia

Australian Air Transport Association

Australian Chamber of Manufactures

Australian Electrical and Electronic Manufacturers Association

Australian Foundry Institute

Australian Information Industry Association

Australian Institute of Steel Construction

Australian Robot Association

Bureau of Steel Manufacturers of Australia

CSIRO Centre for Planning and Design

CSIRO Manufacturing Science and Technology

Department of Defence, Australia

Department of Industry, Science and Tourism, Australia

Federal Chamber of Automotive Industries

Institute of Engineers, Australia

Ministry of Defence New Zealand

Monash University

New South Wales TAFE Commission

New Zealand Chambers of Commerce and Industry

New Zealand Defence Force

New Zealand Heavy Engineering Research

New Zealand Institute of Architects

New Zealand Manufacturers' Federation

Royal Australian Institute of Architects

Royal Melbourne Institute of Technology

University of Auckland (New Zealand)

University of Melbourne

Review of Australian Standards. *To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.*

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 98099.

Australian Standard™

Industrial automation systems and integration—Product data representation and exchange

Part 41: Integrated generic resources: Fundamentals of product description and support

First published as AS 10303.41—1998.

Published by Standards Australia
(Standards Association of Australia)
1 The Crescent, Homebush, NSW 2140

ISBN 0 7337 2133 8

PREFACE

This Standard was prepared by Standards Australia Committee IT/6, Information Technology for Industrial Automation and Integration. The Standard is the result of a consensus among the representatives on the Committee that it be produced as an Australian Standard. It is identical with and has been reproduced from ISO 10303-41:1994, *Industrial automation systems and integration—Product data representation and exchange,* Part 41: *Integrated generic resources: Fundamentals of product description and support*.

The objective of this Standard is to provide users of integrated automation systems with a specification of the general product description, generic management and support resources.

This Standard is Part 41 of AS 10303, *Industrial automation systems and integration—Product data representation and exchange,* which is published in Parts as follows:

Part 1: Overview and fundamental principles
Part 11: Description methods: The EXPRESS language reference manual
Part 21: Implementation methods: Clear text encoding of the exchange structure
Part 31: Conformance testing methodology and framework: General concepts
Part 41: Integrated generic resources: Fundamentals of product description and support (this Standard)
Part 42: Integrated generic resources: Geometric and topological representation
Part 43: Integrated generic resources: Representation structures
Part 44: Integrated generic resources: Product structure configuration
Part 46: Integrated generic resources: Visual representation
Part 101: Integrated application resources: Draughting
Part 201: Application protocol: Explicit draughting
Part 203: Application protocol: Configuration controlled design

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.

Annex C, which is in the form of computer-interpretable listings, and Annex A are supplied on a diskette, which is part of this Standard.

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 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 equivalent Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard or other publication		*Australian or Joint Australian/New Zealand Standard*	
ISO		AS	
31-0	Quantities and units	2900	Quantities, unit and symbols
		2900.0	Part 0: General principles concerning quantities, units and symbols
1000	SI units and recommendations for the use of their multiples and of certain other units	1000	The International System of Units (SI) and its application

ISO		AS	
8601	Date elements and interchange formats—Information interchange—Representations of dates and times	3801	Data elements and interchange formats—Information interchange—Representation of dates and times
8824	Information Technology—Open Systems Interconnection—Abstract Syntax notation One (ASN.1)		
8824-1	Part 1: Specification of Basic Notation	—	
10303	Industrial automation systems and integration—Product data representation and exchange	10303	Industrial automation systems and integration—Product data representation and exchange
10303-1	Part 1: Overview and fundamental principles	10303.1	Part 1: Overview and fundamental principles
10303-11	Part 11: Description methods: EXPRESS language reference manual	10303.11	Part 11: Description methods: The EXPRESS language reference manual
10303-43	Part 43: Integrated resources: Representation structures	10303.43	Part 43: Integrated resources: Representation structures
10303-44	Part 44: Integrated resources: Product structure configuration	10303.44	Part 44: Integrated resources: Product structure configuration

CONTENTS

Page

Page

Page

Page

Page

Page

Page

Page

Annexes

Page

Figures

Tables

AUSTRALIAN STANDARD

Industrial automation systems and integration — Product data representation and exchange — Part 41 : Integrated generic resources: Fundamentals of product description and support

Section 1 : General

1.1 Scope

This part of ISO 10303 specifies the following:

- generic product description resources (section 2);
- generic management resources (section 3);
- support resources (section 4).

The schemas which are specified in this part of ISO 10303 are organized according to these sections.

1.1.1 Generic product description resources

This section of ISO 10303-41 specifies the resource constructs for the high level structure for the representation of products and their properties. It also specifies ISO 10303 integrated resources for the description of generic aspects of product usage, categorization of products and associations between products.

The following are within scope in this section:

- the identification of a product;
- the categorization of products;
- the specification of definitions of, relationships among, and allowable substitutions for a product;
- the specification of the representation of the shape of a product;
- the specification of the representation of the properties of a product;
- the description of the application context for which product data is defined.