AS 10303.1—1998
ISO 10303-1:1994

Australian Standard™

Industrial automation systems and integration—Product data representation and exchange

Part 1: Overview and fundamental principles

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:

Australian Bankers Association

Australian Bureau of Statistics

Australian Computer Association

Australian Computer Society

Australian Information Industry Association

Australian Vice Chancellors Committee

Department of Defence, Australia

Department of Industry, Science and Technology, Australia

Electrical Compliance Testing Association

Government Computing Service, New Zealand

Institute of Information and Communication Technologies, CSIRO, Australia

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Australian Standard™

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Part 1: Overview and fundamental principles

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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 10303-1:1994, *Industrial automation systems and integration—Product data representation and exchange*, Part 1: *Overview and fundamental principles*.

The objective of this Standard is to provide users of integrated automation systems with a representation of product information along with the necessary mechanisms and definitions to enable product data to be exchanged.

This Standard is Part 1 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 (this Standard)
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
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 presentation
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.

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	
10303	Industrial automation systems and integration—Product data representation and exchange	10303	Industrial automation systems and integration—Product data representation and exchange
10303-31	Part 31: Conformance testing methodology and framework: General concepts	10303.31	Part 31: Conformance testing methodology and framework: General concepts

ISO/IEC		AS
8824	Information technology— Open Systems Interconnection— Abstract Syntax Notation One (ASN.1)	
8824-1	Part 1: Specification of Basic Notation	—

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NOTES

AUSTRALIAN STANDARD

Industrial automation systems and integration — Product data representation and exchange— Part 1 : Overview and fundamental principles

1 Scope

This part of ISO 10303 provides an overview of this International Standard.

This International Standard provides a representation of product information along with the necessary mechanisms and definitions to enable product data to be exchanged. The exchange is among different computer systems and environments associated with the complete product lifecycle, including product design, manufacture, use, maintenance, and final disposition of the product.

The following are within the scope of ISO 10303:

- the representation of product information, including components and assemblies;
- the exchange of product data, including storing, transferring, accessing, and archiving.

This part of ISO 10303 defines the basic principles of product information representation and exchange used in ISO 10303. It specifies the characteristics of the various series of parts of ISO 10303 and the relationships among them.

The following are within the scope of this part of ISO 10303:

- an overview of this International Standard;
- the structure of this International Standard;
- definitions of terms used throughout this International Standard;
- an overview of data specification methods used in this International Standard including the *EXPRESS* data specification language and graphical presentation of product information models;
- an introduction to the integrated resources;
- an introduction to application protocols that are used to define the scope, context, and information requirements of an application, and the representation of the application information;
- an introduction to the methodology and framework for conformance testing that provides an assessment of whether an implementation conforms to this International Standard;