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ISO 13584-24:2003

Australian Standard™

Industrial automation systems and integration—Parts library

Part 24: Logical resource: Logical model of supplier library

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PREFACE

This Standard was prepared by the Standards Australia Committee IT-006, Information Technology for Industrial Automation and Integration.

This Standard is identical with, and has been reproduced from, ISO 13584-24:2003, *Industrial automation systems and integration—Parts library,* Part 24*: Logical resource: Logical model of supplier library*.

The objective of this Standard is to provide generic EXPRESS resource constructs that support the description of different kinds of information about supplier libraries. It also contains a set of integrated EXPRESS information models for representing supplier libraries for the purpose of exchange.

This Standard is Part 24 of AS ISO 13584, *Industrial automation systems and integration—Parts library*, which is published in parts as follows:

Part 1: Overview and fundamental principles
Part 101: Geometrical view exchange protocol by parametric program
Part 20: Logical resource: Logical model of expressions
Part 24: Logical resource: Logical model of supplier library (this Standard)
Part 26: Logical resource: Information supplier identification
Part 31: Implementation resources: Geometric programming interface
Part 42: Description methodology: Methodology for structuring part families

The terms ‘normative’ and ‘informative’ are used 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.

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(a) Its number appears on the cover and title page while the international standard number appears only on the cover

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Reference to International Standard		*Australian Standard*	
ISO/IEC		AS/NZS	
8824-1	Information technology—Abstract Syntax Notation One (ASN.1): Specification of basic notation	8824.1	Information technology—Abstract Syntax Notation One (ASN.1): Specification of basic notation
9075	Information technology; database languages; SQL	3968	Information technology; database languages; SQL

ISO		AS	
10303-11	Industrial automation systems and integration—Product data representation and exchange—Part 11: Description methods: The EXPRESS language reference manual	10303.11	Industrial automation systems and integration—Product data representation and exchange, Part 11: Description methods: The EXPRESS language reference manual
10303-21	Industrial automation systems and integration—Product data representation and exchange—Part 21: Implementation methods: Clear text encoding of the exchange structure	10303.21	Industrial automation systems and integration—Product data representation and exchange, Part 21: Implementation methods: Clear text encoding of the exchange structure
10303-41	Industrial automation systems and integration—Product data representation and exchange—Part 41: Integrated generic resources: Fundamentals of product description and support	10303.41	Industrial automation systems and integration—Product data representation and exchange—Part 41: Integrated generic resources: Fundamentals of product description and support
10303-42	Industrial automation systems and integration—Product data representation and exchange—Part 42: Integrated generic resources: Geometric and topological representation	10303.42	Industrial automation systems and integration—Product data representation and exchange, Part 42: Integrated generic resources: Geometric and topological representation
10303-43	Industrial automation systems and integration—Product data representation and exchange—Part 43: Integrated generic resources: Representation structures	10303.43	Industrial automation systems and integration—Product data representation and exchange, Part 43: Integrated generic resources: Representation structures
13584-1	Industrial automation systems and integration—Parts library—Part1: Overview and fundamental principles	13584.1	Industrial automation systems and integration—Parts library, Part1: Overview and fundamental principles
13584-20	Industrial automation systems and integration—Parts library—Part 20: Logical resource: Logical model of expressions	13584.20	Industrial automation systems and integration—Parts library, Part 20: Logical resource: Logical model of expressions
13584-26	Industrial automation systems and integration—Parts library—Part 26: Logical resource: Information supplier identification	13584.26	Industrial automation systems and integration—Parts library, Part 26: Logical resource: Information supplier identification
13584-31	Industrial automation systems and integration—Parts library—Part 31: Implementation resources: Geometric programming interface	13584.31	Industrial automation systems and integration—Parts library, Part 31: Implementation resources: Geometric programming interface
13584-42	Industrial automation systems and integration—Parts library—Part 42: Description methodology: Methodology for structuring part families	13584.42	Industrial automation systems and integration—Parts library, Part 42: Description methodology: Methodology for structuring part families

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INTRODUCTION

ISO 13584 is an International Standard for the computer-interpretable representation and exchange of parts library data. The objective is to provide a neutral mechanism capable of transferring parts library data, independent of any application that is using a parts library data system. The nature of this description makes it suitable not only for the exchange of files containing parts, but also as a basis for implementing and sharing databases of parts library data.

This International Standard is organized as a series of parts, each published separately. The parts of ISO 13854 fall into one of the following series: conceptual descriptions, logical resources, implementation resources, description methodology and view exchange protocol. The series are described in ISO 13584-1. This part of ISO 13584 is a member of the logical resources series.

This part of ISO 13584 specifies the generic resources needed for supplier library modelling and exchange. It also provides the EXPRESS integrated information models that permit the exchange of libraries that consist either of definitions of families of parts, representations of families of parts, or definitions of new representation categories that may be provided for any family of parts. Knowledge of EXPRESS as defined in ISO 10303-11 is required to understand this part of ISO 13584. Basic knowledge of ISO 13584-20 and ISO 13584-42 is also required.

NOTES

AUSTRALIAN STANDARD

Industrial automation systems and integration — Parts library —

Part 24:
Logical resource: Logical model of supplier library

1 Scope

This part of ISO 13584 specifies generic EXPRESS resource constructs that support the description of different kinds of information about supplier libraries. It also contains a set of integrated EXPRESS information models for representing supplier libraries for the purpose of exchange. These integrated information models integrate EXPRESS resource constructs from different parts of ISO 13584 and ISO 10303 into a single schema. Supplier libraries may consist of definitions or representations of families of parts. Supplier libraries may also define new representation categories. Supplier libraries may consist only of dictionary elements, or they may also contain specifications of permitted instances.

When used together with view exchange protocols, these integrated information models also permit the exchange of one or several representation categories for the parts defined in a parts library.

NOTE 1 View exchange protocols are defined in the view exchange protocol series of ISO 13584.

The following are within the scope of this part of ISO 13584:

— Generic resource constructs for representing hierarchies of families of parts. The parts in the families may be components or assembled parts, and may be abstract parts or physical parts.

— Generic resource constructs for representing implicitly the definitions of the different parts that belong to a family of parts.

— Generic resource constructs for representing the different kinds of possible representations of the different parts that belong to a family of parts.

— Generic resource constructs for representing families of materials, together with their definitions and possible representations.

— Library integrated information models that gather generic resource constructs from different parts of ISO 13584 and ISO 10303 into one single schema for representing supplier libraries for the purpose of exchange. The supplier libraries may consist either of definitions of families of parts, or of representations of families of parts or of definitions of new representation categories that may be provided for any family of parts.

The following are outside the scope of this part of ISO 13584:

— Description of assembled parts that may contain an unlimited number of constituent components.

— Specification of a software system able to manage supplier libraries represented according to the information models defined in this part of ISO 13584.

— Description of the different representation categories that a supplier library may contain.

NOTE 2 The description of the different representation categories that a supplier library may contain are defined in the view exchange protocol series of parts of ISO 13584.

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