BS ISO 13584-102:2006

BSI Standards Publication

Industrial automation systems and integration — Parts library

Part 102: View exchange protocol by ISO 10303 conforming specification

bsi.

National foreword

This British Standard is the UK implementation of ISO 13584-102:2006.

The UK participation in its preparation was entrusted to Technical Committee AMT/4, Industrial data and manufacturing interfaces.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Part 102: View exchange protocol by ISO 10303 conforming specification

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies(ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13584-102 was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration,* Subcommittee SC4, *Industrial data.*

ISO 13584 consists of the following parts under the general title *Industrial automation systems and integration — Parts library:*

— *Part 1: Overview and fundamental principles;*

— *Part 20: Logical resource: Logical model of expressions;*

— *Part 24: Logical resource: Logical model of supplier library;*

— *Part 25: Logical resource: Logical model of supplier library with aggregate values and explicit content;*

— *Part 26: Logical resource: Information supplier identification;*

— *Part 31: Implementation resources: Geometric programming interface;*

— *Part 42: Description methodology: Methodology for structuring part families;*

— *Part 101: Geometrical view exchange protocol by parametric program;*

— *Part 102: View exchange protocol by ISO 10303 conforming specification;*

— *Part 501: Reference dictionary for measuring instruments — Registration procedure;*

— *Part 511: Mechanical systems and components for general use — Reference dictionary for fasteners.*

The structure of the ISO 13584 series is described in ISO 13584-1. The numbering of the parts of ISO 13584 reflects its structure:

— Parts 10 to 19 specify the conceptual descriptions,

— Parts 20 to 29 specify the logical resources,

— Parts 30 to 39 specify the implementation resources,

— Parts 40 to 49 specify the description methodology,

— Parts 100 to 199 specify the view exchange protocols,

— Parts 500 to 599 specify reference dictionaries for specific application domains.

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Should further parts of ISO 13584 be published, they will follow the same numbering pattern.

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Introduction

ISO 13584 is an International Standard for the computer-interpretable representation and exchange of part 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.

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

A view exchange protocol specifies how a particular representation category of the items described in a parts library may be exchanged in a library exchange context. It defines the identification of the representation category, the means to be used to exchange representations that belong to this representation category, the implementation resources that shall be available on any implementation that claims conformance to this view exchange protocol, and the standard data that shall be recognized by any implementation that claims conformance to this view exchange protocol.

This part of ISO 13584 specifies how representations of the items described in a parts library may be exchanged by means of a representation conforming to one application protocol of ISO 10303 (ISO 10303 parts numbered between 200 and 299).

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1 Scope

This part of ISO 13584 specifies a representation category, called *ISO10303_rep*. This representation category captures the generic concepts used to describe the representation of a product in ISO 10303 application protocols. This representation category may be associated with any of the items defined in a parts library. This part of ISO 13584 also defines how representations that belong to this representation category may be exchanged within a library exchange context by means of ISO 10303 compliant data repositories.

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

— the definition of the *ISO10303_rep* representation category, and the mechanisms that are to be used to reference it;

— the properties used to characterize a particular representation within the *ISO10303_rep* representation category;

— the implementation resources to be supported by any implementation that claims conformance to this part of ISO 13584;

— the dictionary entries to be supported by any implementation that claims conformance to this part of ISO 13584;

— the standard data to be recognized by any implementation that claims conformance to this part of ISO 13584.

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

— the structure and exchange format of library delivery files;

— the structure and exchange format of library external files that conform to ISO 10303 application protocols.

NOTE 1 The structure of a library delivery file is defined by a library integrated information model specified in one of the logical resource series parts of ISO 13584.

NOTE 2 The **ISO13584_f_m_iim_schema**, documented in ISO 13584-24:2003, is a library integrated information model that defines the structure of a library delivery file. Such a library delivery file may contain instance values that reference the representation category and/or the library external files defined in this part of ISO 13584.

Annex A, which provides information on document identification, forms an integral part of this part of ISO 13584.

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