INTERNATIONAL STANDARD

ISO 13584-26

First edition
2000-02-01

Industrial automation systems and integration — Parts library —

Part 26: Logical resource: Information supplier identification

Systèmes d'automatisation industrielle et intégration — Bibliothèque de composants —

Partie 26: Ressource logique: Identification des fournisseurs d'information

Reference number
ISO 13584-26:2000(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 734 10 79
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

Contents

Page

Tables

Foreword

ISO (the International Organization for Standardization) is a world-wide 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.

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.

International Standard ISO 13584-26 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 10, Conceptual description: Conceptual model of parts library;

Part 20, Logical resource: Logical model of expressions;

Part 24, Logical resource: Logical model of supplier library;

Part 26, Logical resource: Information supplier identification;

Part 31, Implementation resource: Geometric programming interface;

Part 42, Description methodology: Methodology for structuring part families;

Part 101, View exchange protocol: Geometric view exchange protocol by parametric program;

Part 102, View exchange protocol: View exchange protocol by ISO 10303 conforming specification.

The structure of this International Standard is described in ISO 13584-1. The numbering of the parts of this International Standard 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 50 to 59 specify the conformance testing;

— Parts 100 to 199 specify the view exchange protocol;

— Parts 500 to 599 specify the standardised content.

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

Annex A forms an integral part of this part of ISO 13584.

Annexes B and C are for information only.

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.

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, conformance testing, view exchange protocol, and standardised content. The series are described in ISO 13584-1.

This part of ISO 13584 is a member of the logical resources series. It defines the identification of the information suppliers of the contents of a library in order to trace who supplied them and who is therefore responsible for them. This identification has to be easy and unambiguous for all supplied libraries whether they are based on external (e.g. national, international) or internal (e.g. company) standards. This part of ISO 13584 defines a code to identify the supplier within this International Standard, and, when the content of a library was already defined in a standard document, a code to identify this standard document. Basic knowledge of EXPRESS is required to understand this part of ISO 13584. No knowledge of the other parts of ISO 13584 is required.

Industrial automation systems and integration – Parts library – Part 26: Logical resource: Information supplier identification

1 Scope

This part of ISO 13584 specifies a supplier code to identify the information suppliers of the contents of a library and, when the content of this library was provided in a standard document, a code that identifies this standard document.

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

— a code to identify the supplier of information contained in a parts library, and

— a code to identify a standard document when the content of a parts library are defined in a standard document.

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

— a code to identify the supplier of a part.

NOTE The supplier code enables the user of a library to trace the supplier of any information about a part that has an entry in the library and to trace the data given by a particular information supplier.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 13584. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 13584 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references the latest edition of the publication referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 6523-1:1998, *Information technology — Structure for the identification of organizations and organization parts — Part 1: Indentification of organization identification schemes.*

ISO/IEC 8824-1:1995, *Information Technology —Abstract Syntax Notation One (ASN.1): Specification of basic notation.*

ISO 10303-11:1994, *Industrial automation systems and integration — Product data representation and exchange — Part 11: Description methods: The EXPRESS language reference manual.*

ISO/IEC 10646-1:1993, *Information technology — Universal Multiple-Octet Coded Character Set (UCS) — Part 1: Architecture and Basic Multilingual Plane.*

ISO/IEC 11179-3:1994, *Information technology — Specification and standardization of data elements — Part 3: Basic attributes of data elements.*

ISO 13584-1:—[1)], *Industrial Automation Systems and Integration — Parts Library — Part 1: Overview and Fundamental Principles.*

3 Terms, definitions, and abbreviations

For the purposes of this part of ISO 13584, the following terms and definitions apply. Some of these terms and definitions are repeated for convenience from ISO 11179-3:1994 and ISO/IEC 6523-1:1998.

1) To be published.

3.1

data element
a unit of data for which the definition, identification, representation and permissible values are specified by means of a set of attributes
[ISO/IEC 11179-3:1994]

3.2

data element value
a value out of a set of permissible values pertaining to a data element
[ISO/IEC 6523-1:1998]

3.3

identification scheme
a system allocating identifiers to registered objects
[ISO/IEC 6523-1:1998]

3.4

identifier
a character or group of characters constituting a data element value used to identify or name an object and possibly to indicate certain properties of that object
[ISO/IEC 6523-1:1998]

3.5

information supplier
an organization or organization part (see 3.10) that supplies information about parts (see 3.13)

EXAMPLE A person, a company, a part of a company, or a government agency.

3.6

International Code Designator
ICD
the data element used to uniquely identify an organization identification scheme
[ISO/IEC 6523-1:1998]

3.7

organization
a unique framework of authority within which a person or persons act, or are designated to act, towards some purpose
[ISO/IEC 6523-1:1998]

NOTE The kinds of organizations covered by ISO/IEC 6523-1 include the following examples:

a) an organization incorporated under law;

b) an unincorporated organization or activity providing goods and/or services including:

1) partnerships;

2) social or other non-profit organizations or similar bodies in which ownership or control is vested in a group of individuals;

3) sole proprietorships;

4) governmental bodies.

c) groupings of the above types of organizations where there is a need to identify these in information interchange.

3.8

organization identification scheme
an identification scheme dedicated to the unique identification of organizations
[ISO/IEC 6523-1:1998]

3.9

organization identifier
OI
the identifier assigned to an organization within an organization identification scheme, and unique within that scheme
[ISO/IEC 6523-1:1998]

3.10

organization part
any department, service or other entity within an organization, which needs to be identified for information interchange
[ISO/IEC 6523-1:1998]

3.11

organization part identifier
OPI
an identifier allocated to a particular organization part
[ISO/IEC 6523-1:1998]

3.12

OPI source indicator
OPIS
the data element used to specify the source for the organization part identifier
[ISO/IEC 6523-1:1998]

3.13

part
a material or functional element that is intended to constitute a component of different products
[ISO 13584-1:—[2)]]

3.14

parts library
an identified set of data and possibly programs which may generate information about a set of parts
[ISO 13584-1:—[2)]]

3.15

standard document
a documented agreement containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that one or more materials, products, processes, or services are fit for the purposes for which the materials, products, processes, or services are intended

3.16

Wirth Syntax Notation derivative
WSND
the derivative of Wirth Syntax Notation defined in Clause 6.1 of ISO 10303-11:1994

4 Structure

4.1 Structure for the identification of organizations

The information supplier shall be identified as specified in ISO/IEC 6523-1:1998, Clause 4.

NOTE 1 Table 1 shows the data elements that make up the structure for the identification of organizations defined in ISO/IEC 6523-1:1998, Clause 4.

2) To be published.

NOTE 2 Leading zeroes may appear in the ICD. They are not significant for identifying the organization.

EXAMPLE "0004", "004", "04" and "4" all identify the "NBS/OSI NETWORK" (see Table C.1). NBS is an abbreviation for the National Bureau of Standards (the old name for the United States National Institute of Standards and Technology). OSI is an abbreviation for Open Systems Interconnection (see ISO/IEC 2382-26:1993).

NOTE 3 It is the responsibility of the information supplier to decide in which identification scheme it applies for registration. A supplier may apply for registration under more than one identification scheme. A supplier may also apply for only one organization identification for all the libraries it provides or it may apply for several organization identifications.

The structure for the identification of organizations shall be encoded using the character set specified in Clause 7.1 of ISO 10303-11:1994.

NOTE 4 The character set specified in Clause 7.1 of ISO 10303-11:1994 is a subset of the character set specified in ISO/IEC 10646-1:1993.

NOTE 5 Technical Corrigendum 1 to ISO 10303-11:1994 makes important changes to Clause 7.1.

NOTE 6 ISO 6523-1 does not specify the character set that shall be used for encoding the structure for the identification of organizations. The character set specified in Clause 7.1 of ISO 10303-11:1994 is chosen in this part of ISO 13584 so that the structure for the identification of organizations may be stored as a STRING attribute of an EXPRESS entity data type.

When the supplier identification is used within any other part of ISO 13584 or within IEC 61360-2:1997, the OPI and OPIS shall not be present.

NOTE 7 Although the OPI and OPIS may not be used within any other part of ISO 13584 or within ISO 61360-2:1997, this part of ISO 13584 provides a mechanism for encoding them so that they may be used as part of the supplier identification when this part of ISO 13584 is used by other standards.

Table 1 — Data elements of the structure for the identification of organizations

Data element name	Description	Mandatory or optional	Data type[a]	Maximum length
International Code Designator (ICD)	the identification of an organization identification scheme	mandatory	integer[b]	4
organization identifier (OI)	the identification of an organization within an identification scheme	mandatory	string	35
organization part identifier (OPI)	the identification of an organization part	optional	string	35
OPI source indicator (OPIS)	the specification of the source of the OPI	optional	character	1

[a]The data types in this table conceptually describe the structure for the identification of organizations. An implementation of this part of ISO 13584 may use any representation of the data type internally. Requirements for exchange of this information are given in Clause 4.3.

[b]The ICD may be represented as a string internally within implementations of this part of ISO 13584.

4.2 Functions

4.2.1 encode

Function encode is used to encode the OI and the OPI so that they can be transmitted unambiguously. Function encode transforms the string s by replacing any occurrence of a character in the column entitled "Character" of Table 2 with the corresponding sequence shown in the column entitled "Substituted string" of the same row of Table 2.

Function `encode` always replaces '%' with '%%' and '/' with '%/'. In addition, any characters that are passed in the `characters` argument are replaced with the sequence '%', the character's code in the ISO/IEC 10646-1:1993 character set, and ';'.

Table 2 — Character substitutions for encode function

Character	Character name	Substituted string	Comment
%	percent	%%	
/	forward slash	%/	
	any character that the referencing standard does not allow in the supplier code	%*N*;	*N* is the character code of the character in the ISO/IEC 10646-1:1993 character set, interpreted as an integer

```
*)

FUNCTION encode(s : STRING; characters : SET OF STRING): STRING;

  LOCAL
    i: INTEGER;
    pos: INTEGER;
    strtmp: STRING;
    result: STRING := '';
  END_LOCAL;

  REPEAT i := 1 TO LENGTH(s);
    IF s[i] IN ['%', '/'] THEN
      result := result + '%' + s[i];
        ELSE
      IF s[i] IN characters THEN
        pos := icode(s[i]);
        strtmp := FORMAT(pos, '2I');
        IF pos < 10 THEN
          strtmp := strtmp[2:2];
        END_IF;
        result := result + '%' + strtmp + ';';
      ELSE
        result := result + s[i];
      END_IF;
    END_IF;
  END_REPEAT;
  RETURN (result);
END_FUNCTION;

(*
```


4.2.2 icode

Function `icode` returns the character code of a character in the ISO/IEC 10646-1:1993 character set, interpreted as an integer value.

```
*)

FUNCTION icode (c : STRING): INTEGER;
  LOCAL
    i: INTEGER;
  END_LOCAL;

  (* set i to character code of c in the ISO/IEC 10646-1:1993
     character set, interpreted as an integer value *)

  RETURN (i);
END_FUNCTION;
```