

Information technology — Specification and standardization of data elements —

Part 3: Basic attributes of data elements

ICS 35.040

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National foreword

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The UK participation in its preparation was entrusted by Technical Committee BRD/2, International policy group, to Subcommittee BRD/2/2, EDI standards co-ordinating committee, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO/IEC title page, pages ii to iv, pages 1 to 21 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date	Comments

This British Standard, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Board and comes into effect on 15 September 1997

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ISBN 0 580 27833 6

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INTERNATIONAL
STANDARD

ISO/IEC
11179-3

First edition
1994-12-15

**Information technology — Specification
and standardization of data elements —**

Part 3:

Basic attributes of data elements

*Technologies de l'information — Spécifications et normalisation des
éléments de données —*

Partie 3: Attributs de base des éléments de données



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Descriptors: Data processing, information interchange, data representation, data elements, specifications, characteristics.

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National Bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 11179-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, SC 14, *Data element principles*.

ISO/IEC 11179 consists of the following parts, under the general title *Information technology — Specification and standardization of data elements*:

- *Part 1: Framework for the generation and standardization of data elements*;
- *Part 2: Classification of concepts for the identification of domains*;
- *Part 3: Basic attributes of data elements*;
- *Part 4: Rules and guidelines for the formulation of data definitions*;
- *Part 5: Naming and identification principles for data elements*;
- *Part 6: Registration of data elements*.

Annex A, Annex B, Annex C and Annex D of this part of ISO/IEC 11179 are for information only.

Introduction

This part of ISO/IEC 11179 defines basic attributes for specifying data elements.

Data processing and electronic data interchange heavily relies on accurate, reliable, controllable and verifiable data recorded in databases.

One of the prerequisites for a correct and proper use and interpretation of data is that both users and owners of data have a common understanding of the meaning and representation of the data elements. To facilitate a shared view of data elements, a number of attributes have to be defined.

1 Scope

This part of ISO/IEC 11179 specifies attributes of data elements. It is limited to a set of basic attributes independently of their usage in application systems, databases, data interchange messages, etc.

This part of ISO/IEC 11179 applies to activities including:

- a) the definition, specification and contents of data element dictionaries;
- b) the design and specification of application-oriented data models, databases and message types for data interchange;
- c) the actual use of data in communications and information processing systems;
- d) interchanging or referencing among various collections of data elements.

This set of basic attributes will have to be extended with additional attributes to enable the performance of a comprehensive data management function. No logical or physical structure of the data is implied in this part of ISO/IEC 11179.

A comprehensive data management function also requires a set of rules and procedures for classifying, defining, identifying, naming and registering data elements. These rules and procedures are outside the scope of this part and are covered in the other parts of ISO/IEC 11179.

Techniques for implementing a data element dictionary using this part of ISO/IEC 11179 are outside the scope of this part of ISO/IEC 11179.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions for this part of ISO/IEC 11179. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 11179 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 646:1991, *Information technology — ISO 7-bit coded character set for information interchange*.

ISO 3166:1993, *Codes for the representation of names of countries*.

ISO 6093:1985, *Information processing — Representation of numerical values in character strings for information interchange*.

3 Definitions

For the purpose of this part of ISO/IEC 11179 the following definitions apply.

3.1

attribute

a characteristic of an object or entity

3.2

attribute value

a representation of an instance of an *attribute*

3.3

data element

a unit of data for which the definition, identification, representation and permissible values are specified by means of a set of *attributes*