INTERNATIONAL STANDARD

ISO/IEC 14957

Second edition
2010-12-15

Information technology — Representation of data element values — Notation of the format

Technologies de l'information — Représentation des valeurs des éléments de données — Notation du format

COPYRIGHT PROTECTED DOCUMENT

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

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

ISO/IEC 14957 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

This second edition cancels and replaces the first edition (ISO/IEC 14957:1996), which has been technically revised.

Introduction

Data interchange is experiencing rapid expansion in the commercial, technical and public sectors. It gives rise to interworking between different communities which have often independently developed information processing applications and telecommunication networks to meet specific needs. Hence, the overall situation suffers from a lack of homogeneity.

In order to remedy this situation, an urgent standardization effort focused in particular on the representation of data elements is necessary.

The representation of a data element supposes in the first place that the format, i.e. the types of character used in the representation and the length of the representation, is specified. In order that these specifications have the same significance for everyone involved, it is necessary to express them in accordance with standardized conventions.

Such rules are likely to eliminate any and all risk of ambiguity, lack of understanding and error; they also facilitate the comparison of data element dictionaries, the design and creation of information systems, and electronic data interchange (EDI).

These notations have been partially and variously expressed in different International Standards according to the specific contexts in which they have been defined, e.g. EDIFACT (ISO 9735), banking standards (such as ISO 7982-1), character sets (ISO/IEC 8859), information processing (ISO 6093), and programming languages (ISO/IEC 9899).

The objective of this International Standard is to provide a unique source of reference on this subject for all standards utilizing these type of notations independently of their environments.

Information technology — Representation of data element values — Notation of the format

1 Scope

This International Standard specifies the notation to be used for stating the format, i.e. the character classes, used in the representation of data elements and the length of these representations. It also specifies additional notations relative to the representation of numerical figures. For example, this formatting technique might be used as part of the metadata for data elements.

The scope of this International Standard is limited to graphic characters, such as digits, letters and special characters. The scope is limited to the basic datatypes of characters, character strings, integers, reals, and pointers.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 10646:2003, *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*