SLOVENSKI PREDSTANDARD

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Information and documentation - Bibliographic data element directory - Part 3: Information retrieval applications

INTERNATIONAL STANDARD

ISO
8459-3

Information and documentation — Bibliographic data element directory —

Part 3:
Information retrieval applications

Information et documentation — Répertoire des éléments de données bibliographiques —

Partie 3: Applications à la recherche documentaire

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.

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 8459-3 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 4, *Computer applications in information and documentation*.

ISO 8459 consists of the following parts, under the general title *Information and documentation — Bibliographic data element directory*:

— *Part 1: Interloan applications*

— *Part 2: Acquisitions applications*

— *Part 3: Information retrieval applications*

Annex A forms an integral part of this part of ISO 8459. Annexes B and C are for information only.

Introduction

Data are interchanged for the purpose of starting or supporting a process. In order to transmit information required to support a process, the various elements of data in the interchanged messages must be fully understandable to the processes concerned. This part of ISO 8459 describes, in the form of a directory, data elements used to support information retrieval processes or applications.

The data elements that may occur in an information retrieval transaction are presented in four ways:

a) A data element directory (see clause 4) with annexes containing code values and description for messages (see A.1) and date time qualifier (see A.2);

b) An index (see clause 5) consisting of names, keywords and synonyms for data elements and data element values including names assigned to date/time qualifiers and messages;

c) A structured order of data elements (see clause 6) which relates similar data elements in a hierarchical fashion;

d) A matrix (see clause 7) showing the data elements pertaining to specific information retrieval messages.

ISO 8459 will, when complete, comprise a comprehensive data element directory for bibliographic use. This part of ISO 8459 is primarily intended for new documentation and information retrieval systems.

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Information and documentation — Bibliographic data element directory —

Part 3:
Information retrieval applications

1 Scope

This part of ISO 8459 specifies and describes data elements required in the interchange of data between information retrieval systems (i.e. terminal-to-computer or computer-to-computer). It also identifies messages and their data elements which are used in information retrieval transactions.

It is intended to support both batch and interactive information retrieval transactions. Annex B provides examples of how this part of ISO 8459 may be used.

The structuring of the data elements in support of information retrieval applications falls outside the scope of this part of ISO 8459. For sample structuring of these data elements, see ISO 8777 (commands for interactive searching), ISO 10162 (search and retrieve application service definition for open systems interconnection) and ISO 10163 (search and retrieve application protocol specification for open systems interconnection).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8459. 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 8459 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 639:1988, *Code for the representation of names of languages.*

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

ISO 2108:1992, *Information and documentation — International standard book numbering (ISBN).*

ISO 2709:1981, *Documentation — Format for bibliographic information interchange on magnetic tape.*

ISO 2788:1986, *Documentation — Guidelines for the establishment and development of monolingual thesauri.*

ISO 3297:1986, *Documentation — International standard serial numbering (ISSN).*

ISO 4217:1990, *Codes for the representation of currencies and funds.*

ISO 5426:1983, *Extension of the Latin alphabet coded character set for bibliographic information interchange.*

ISO 5427:1984, *Extension of the Cyrillic alphabet coded character set for bibliographic information interchange.*

ISO 5428:1984, *Greek alphabet coded character set for bibliographic information interchange.*

ISO 7498-3:1989, *Information processing systems — Open Systems Interconnection — Basic Reference Model — Part 3: Naming and addressing.*

ISO 8601:1988, *Data elements and interchange formats — Information interchange — Representation of dates and times.*

ISO 8777:1993, *Information and documentation — Commands for interactive text searching.*

ISO 9040:1990, *Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Service.*

ISO 9041-1:1990, *Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Protocol — Part 1: Specification.*

ISO/IEC 10027:1990, *Information technology — Information Resource Dictionary System (IRDS) framework.*

ISO 10162:1993, *Information and documentation — Open Systems Interconnection — Search and Retrieve Application Service Definition.*

ISO 10163-1:1993, *Information and documentation — Open Systems Interconnection — Search and Retrieve Application Protocol Specification — Part 1: Protocol specification.*

3 Definitions

For the purposes of this part of ISO 8459, the following definitions apply.

3.1 character string: A combination of letters, digits, punctuation marks or other symbols.

3.2 data element: A basic unit of identifiable and definable data. It has a data element name represented by a tag as identifier and one or more values for expressing (a) particular fact(s).

3.3 data element directory: A listing of data elements with specifications of representative data element values, as appropriate.

3.4 data element group: A set of related data elements.

3.5 data element group name: One or more words in a natural language identifying a data element group.

3.6 data element name: One or more words in a natural language identifying a data element.

3.7 data element value: A fact expressed by codes, digits or natural language corresponding to the data element description and representation.

3.8 information retrieval: The action, methods and procedures for recovering from stored data information on a given matter or references to pertinent documents.

3.9 message: A structured combination of data elements used in an information retrieval transaction.

3.10 record: A group of data usually treated as a unit.

3.11 representation: The way in which a particular data element value is expressed using one or more number(s), letter(s) or symbol(s).

3.12 result set: The group of records, citations, items, or other information units retrieved by the use of a FIND command in the search process.

3.13 search request: A structured query which describes the data elements and their values that the retrieved items should satisfy.

3.14 tag: An identifier allocated for use in place of a data element name or data element group name. (In this part of ISO 8459, a group of three digits.)

3.15 transaction: The creation or modification of a message required to support the retrieval of full text or secondary information request for the source document and associated payments.

4 Directory

The directory names and defines data elements and data element groups used to support information retrieval transactions. The information pertaining to each data element or data element group is presented in four separate columns, labelled tag, name, description and representation. A "tag" is used to identify a data element as well as a data element group. "Name" contains data element names and data element group names. Data element group names are printed in bold letters to differentiate them from data element names. "Description" includes a definition for each data element or data element group followed by a list of corresponding tags for data elements that comprise the group. "Representation and remarks" includes