

Second edition
2006-11-01

Corrected version
2006-12-01

**Information technology — Database
languages — SQL multimedia and
application packages —**

**Part 6:
Data mining**

*Technologies de l'information — Langages de bases de données —
Multimédia SQL et paquetages d'application —*

Partie 6: Exploration de données

Reference number
ISO/IEC 13249-6:2006(E)



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Published in Switzerland

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Foreword

ISO/IEC 13249-6:2006(E)

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 13249-6 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 13249-6:2002), which has been technically revised.

ISO/IEC 13249 consists of the following parts, under the general title *Information technology — Database languages — SQL multimedia and application packages*:

- *Part 1: Framework*
- *Part 2: Full-Text*
- *Part 3: Spatial*
- *Part 5: Still image*
- *Part 6: Data mining*
- *Part 7: History*

This corrected version of ISO/IEC 13249-6:2006 inserts pages 269 and 270, which duplicated pages 271 and 272 in the original version.

Introduction

The purpose of this ISO/IEC 13249 is to define multimedia and application specific types and their associated routines using the user-defined features in ISO/IEC 9075:2003.

The organization of this part of ISO/IEC 13249 is as follows.

Clause 1, "Scope", specifies the scope of this part of ISO/IEC 13249.

Clause 2, "Normative references", identifies additional standards that, through reference in this part of ISO/IEC 13249, constitute provisions of this part of ISO/IEC 13249.

Clause 3, "Terms, definitions, notations and conventions", defines the notations and conventions used in this part of ISO/IEC 13249.

Clause 4, "Concepts", presents concepts used in the definition of this part of ISO/IEC 13249.

Clause 5, "Data Mining Data Types", defines the user-defined types and associated routines for the data definitions of data mining.

Clause 6 "Association Rules", defines the user-defined types and associated routines for the search for association rules.

Clause 7, "Clustering", defines the user-defined types and associated routines for clustering.

Clause 8, "Classification", defines the user-defined types and associated routines for classification.

Clause 9, "Regression", defines the user-defined types and associated routines for regression.

Clause 10, "Status Codes", defines the SQLSTATE codes used in this part of ISO/IEC 13249.

Clause 11, "Conformance", defines the criteria for conformance to this part of ISO/IEC 13249.

Annex A, "Implementation-defined elements", is an informative annex. It lists those features for which the body of this part of ISO/IEC 13249 states that the syntax or meaning or effect on the database is partly or wholly implementation-defined, and describes the defining information that an implementor shall provide in each case.

Annex B, "Implementation-dependent elements", is an informative annex. It lists those features for which the body of this part of ISO/IEC 13249 states explicitly that the meaning or effect on the database is implementation-dependent.

Annex C, "A scenario using the classification technique", is an informative annex. It presents explanatory material on how to use this part of ISO/IEC 13249.

Information technology — Database languages — SQL multimedia and application packages —

Part 6: Data mining

1 Scope

ISO/IEC 13249 defines a number of packages of generic data types common to various kinds of data used in multimedia and application areas, to enable that data to be stored and manipulated in an SQL database.

This part of ISO/IEC 13249

- a) introduces the data mining part of ISO/IEC 13249,
- b) gives the references necessary for this part of ISO/IEC 13249,
- c) defines notations and conventions specific to this part of ISO/IEC 13249,
- d) defines concepts specific to this part of ISO/IEC 13249,
- e) defines data mining user-defined types and their associated routines.

The data mining user-defined types defined in this part adhere to the following.

— A data mining user-defined type is generic to data mining data handling. It addresses the need to store, manage and retrieve information based on elements such as data mining models, data mining settings, and data mining test results.

— A data mining user-defined type does not redefine the database language SQL directly or in combination with another data mining data type.

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.

2.1 International Standards

ISO/IEC 13249-1:2006, *Information technology — Database languages — SQL multimedia and application packages — Part 1: Framework*

2.2 Publicly-available specifications

Extensible Markup Language (XML) 1.0 (Third Edition). W3C Recommendation 04 February 2004, <http://www.w3.org/TR/2004/REC-xml-20040204>.

Predictive Model Markup Language (PMML) 3.0, <http://www.dmg.org/pmml-v3-0.html>