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

**Part 5:
Still image**

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

Partie 5: Image fixe

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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 13249-5 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 13249-5:2001), 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*

Introduction

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

This document is based on the content of ISO/IEC International Standard Database Language (SQL).

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

- 1) Clause 1, "Scope", specifies the scope of this part of ISO/IEC 13249.
- 2) 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.
- 3) Clause 3, "Definitions, notations, and conventions", defines the notations and conventions used in this part of ISO/IEC 13249.
- 4) Clause 4, "Concepts", presents concepts used in the definition of this part of ISO/IEC 13249.
- 5) Clause 5, "Still Image Types", defines the still image user-defined types and associated routines.
- 6) Clause 6, "Feature Types", defines the user-defined types provided for the manipulation of still image features.
- 7) Clause 7, "SQL/MM Still Image Information Schema" defines the SQL/MM Still Image Information Schema.
- 8) Clause 8, "SQL/MM Still Image Definition Schema" defines the SQL/MM Still Image Definition Schema.
- 9) Clause 9, "Status Codes", defines the SQLSTATE codes used in this part of ISO/IEC 13249.
- 10) Clause 10, "Conformance", defines the criteria for conformance to this part of ISO/IEC 13249.
- 11) 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 implementer shall provide in each case.
- 12) 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.

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

Part 5: Still image

1 Scope

This part of ISO/IEC 13249:

- a) introduces the still image part of ISO/IEC 13249 (all parts);
- 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 the still image user-defined types and their associated routines.

The still image user-defined types defined in this part of ISO/IEC 13249 adhere to the following.

- A still image user-defined type is generic to image handling. It addresses the need to store, manage and retrieve information based on aspects of inherent image characteristics such as height, width and format and based on image features such as average color, color histogram, positional color and texture. It also addresses the need to employ manipulation such as rotation, scaling, as well as similarity assessment.
- A still image user-defined type does not redefine the database language SQL directly or in combination with another still image data type.

The still image user-defined types are applicable to all different image formats. However, not all functionality can be used with all known still image formats.

An implementation of this part of ISO/IEC 13249 may exist in environments that also support information and content management, decision support, data mining and data warehousing systems.

Application areas addressed by implementations of this part of ISO/IEC 13249 include, but are not restricted to, graphics, multimedia, scientific research and medicine.

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 9075-9:2001, *Information technology — Database languages — SQL — Part 9: Management of External Data (SQL/MED)*

ISO/IEC 13249-1:2002, *Information technology — Database languages — SQL multimedia and application packages — Part 1: Framework*

ISO/IEC 10918-1:1994, *Information technology — Digital compression and coding of continuous-tone still images: Requirements and guidelines*

ISO/IEC 15444-1:2000, *Information technology — JPEG 2000 image coding system — Part 1: Core coding system*