



Nederlandse norm

# **NEN-ISO/IEC 13249-3**

(en)

Information technology - Database languages -  
SQL multimedia and application packages - Part  
3: Spatial (ISO/IEC 13249-3:2011, IDT)

Vervangt NEN-ISO/IEC 13249-3:2006

ICS 35.060  
mei 2011

Als Nederlandse norm is aanvaard:

- ISO/IEC 13249-3:2011, IDT

Oorb  
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Beleidscommissie 365 "BC IT Generiek en Telecommunicatie"



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Part 3:  
Spatial

*Technologies de l'information — Langages de bases de données —  
Multimedia SQL et paquetages d'application —  
Partie 3: Spatial*

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Published in Switzerland

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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 part of ISO/IEC 13249 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 13249-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

This fourth edition cancels and replaces the third edition (ISO/IEC 13249-3:2006), 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*

## Introduction

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

ISO/IEC 13249 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:

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 and 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, "Geometry Types", defines the geometry supertype.

Clause 6, "Point Types", defines primitive 0-dimensional geometry types.

Clause 7, "Curve Types", defines primitive 1-dimensional geometry types.

Clause 8, "Surface Types", defines primitive 2-dimensional geometry types.

Clause 9, "Geometry Collection Types", defines the geometry collection types.

Clause 10, "Topology-Geometry", defines node, edge, and face topology-geometry primitives.

Clause 11, "Topology-Network", defines node and link topology-network primitives.

Clause 12, "General Routines", defines the routines to determine shortest path in directed or undirected graphs.

Clause 13, "Spatial Reference System Type", defines the user-defined type to manage spatial reference systems.

Clause 14, "Angle and Direction Types", defines the angles and direction types.

Clause 15, "Support Types", defines supporting types and routines used by this part of ISO/IEC 13249.

Clause 16, "Support Routines", defines supporting functions and procedures used by this part of ISO/IEC 13249.

Clause 17, "SQL/MM Spatial Information Schema" defines the SQL/MM Spatial Information Schema.

Clause 18, "SQL/MM Spatial Definition Schema" defines the SQL/MM Spatial Definition Schema.

Clause 19, "Status Codes", defines the SQLSTATE codes used in this part of ISO/IEC 13249.

Clause 20, "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 implementer needs to 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, "Deprecated features", is an informative annex. It lists features that the responsible Technical Committee intend will not appear in a future revised version of this part of ISO/IEC 13249.

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