



19107 Geographic information – Spatial schema

This document provides a conceptual schema for describing aspects of the spatial characteristics or attributes of geographic features or other similar entities. This standard defines and describes a fundamental model for computer representations of geometry and topology that is referenced to reality by the coordinates systems as defined in ISO 19111, for use in other standards. No restrictions are placed on that use by this standard.

In addition to data structures, and abstract types, this standard provides UML operation interface protocols for the manipulation and analysis of individual spatial (geometric or topological) objects. Further, a taxonomic system is defined for defining and calculating the topological spatial relationships between objects. This combined with the various metric operations on the objects themselves, allow for a full query and analysis capability of spatial objects for use in geographic information systems and other similar applications.

A computer aided drafting approach was used, making this standard consistent with the mainstream computer aided drafting, design and manufacturing (CAD/CAM) commercial systems available. This standard is harmonized with STEP (ISO 10303) and with the SQL standard for spatial types (ISO/IEC 13249-3:1999, *Information technology — Database languages — SQL Multimedia and Application Packages — Part 3: Spatial*).

This document does not directly address coverage geometries.

The standard is of particular relevance to the following sectors:

Sector	Of particular interest
Developers of GIS products	Yes
Developers of GIS application systems	Yes
Producers/ suppliers of geographic data	
Users of geographic data and GIS	Yes
Developers of standards	

For further information on this standard and its implementation, please contact ISO/TC 211 secretariat via www.isotc211.org, or the project editor:

John R. Herring
Oracle Corporation
One Oracle Drive
Nashua, New Hampshire 03062
USA

Phone: +1 (603) 897-3216
Email: john.herring@oracle.com