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a processor searching the object-oriented hierarchical database in response to a user-specified query; and a graphical user interface for accepting the user-specified query and for displaying the results of the object-oriented database search.

11. A computer program embodied on a computer-readable medium to access an object-oriented spatial database, comprising:

a construction code section to build a hierarchy of spatial data, including the levels of library, coverage, and feature data;

an addition code section to add data associated with one or more of the hierarchical levels;

an indexing code section to spatially index data among objects across hierarchical levels of the object-oriented database;

a change code section to update data associated with one or more of the hierarchical levels; and

a query code section to search the object-oriented database for user-specified features and to view the search results.

12. A four-dimensional data structure embodied on a computer-readable medium for building and maintaining an object-oriented spatial database, comprising:

the four-dimensional data structure being structured according to database, library, object, and primitive levels;

the data at each level being spatially indexed to the data above and below each said level; and

the data within the object-oriented spatial database being exported to a relational database in vector product format (VPF).

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13. An apparatus for building and maintaining an object-oriented hierarchical database of spatial data, comprising:

a processor spatially indexing objects across hierarchical levels of the object-oriented database such that the spatial data is linked to objects located at levels higher and lower than itself;

a storage device on a computer-readable medium on which is stored the object-oriented hierarchical database;

a processor updating the spatial data such that the data shared among features is retained; and

an output device displaying to a user results of a user-specified query of the object-oriented hierarchical database.

14. An apparatus for building and maintaining an object-oriented hierarchical database of spatial data, comprising:

processor means for transforming data into a linked hierarchical structure; storage means for storing spatially-linked hierarchical data on a computer-readable medium;

input means for entering update data for the object-oriented hierarchical database; input means for entering database query instructions;

processor means for selecting object-oriented database objects and features that satisfy the database query; and

output means for displaying the object-oriented database objects and features that satisfy the database query.

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