Session 7.3:

Special interest points in the realisation of databases

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Content

- **Special Interest Points (Part 1)**

    - Realisation of databases: open source vs. proprietary?

    - Finances & administration & human resources at BKG (Germany)

    - Future trends on volunteered geographic information and crowd sourcing

- **Special Interest Points (Part 2)**

    - **UNECA initiative – GeoNyms desktop application (Yoseph)**

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Operating System:
Microsoft Windows 2000?

Linux? (open source)

Database:
Microsoft Access?

MySQL? PostGreSQL/PostGIS? (open source)

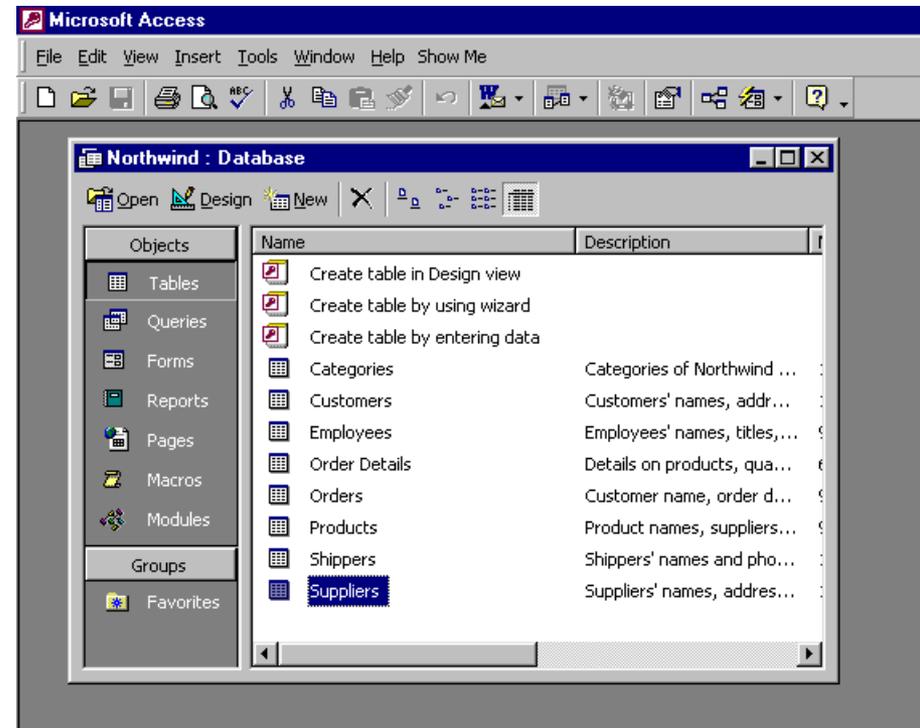UNECA GeoNyms application? (open source)

Geographical Information System
ESRI ArcGIS?

Quantum GIS? (open source)

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Database:
Microsoft Access? (proprietary)

- Microsoft Access is a **pseudo-relational database management** system from Microsoft that combines the relational Microsoft Jet Database Engine with a graphical user interface and software-development tools.

- Access stores data in its **own format** based on the Access Jet Database Engine. It can also import or link directly to data stored in other applications and databases.

- Website:
http://office.microsoft.com/en-us/access/

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Database:
MySQL? PostGreSQL/PostGIS? **(open source)**

My SQL *"The world's most popular open source database"*
- MySQL is a **relational database management system** (RDBMS) that runs as a server providing multi-user access to a number of databases.
- The MySQL development project has made its **source code available** under the terms of the GNU General Public License, as well as under a variety of proprietary agreements.
- MySQL is a popular choice of database for use in web applications.
- Website: http://www.mysql.com/

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Database:
MySQL? PostGreSQL/PostGIS? (open source)

PostGreSQL / PostGIS (open source)

- PostgreSQL, often simply Postgres, is an **object-relational database management system** (ORDBMS).
- PostgreSQL is not controlled by any single company — a global community of developers and companies develops the system.
- PostGIS **adds support for geographic objects** to the PostgreSQL object-relational database. In effect, PostGIS "spatially enables" the PostgreSQL server, allowing it to be used as a backend spatial database for geographic information systems (GIS), much like ESRI's SDE or Oracle's Spatial extension.
- Website: http://www.postgresql.org/
                     http://postgis.refractions.net/

Geographical Information System
ESRI ArcGIS? **(proprietary)**

ESRI Arc GIS

Esri® ArcGIS® facilitates collaboration and **lets you author data, maps, globes, and models on the desktop** and serve them for use on a desktop, in a browser, or in the field, depending on the needs of your organization.

- ArcGIS **support and educational services** consist of technical maintenance programs, software releases and updates, technical support, online support services, publications training, and consulting services.
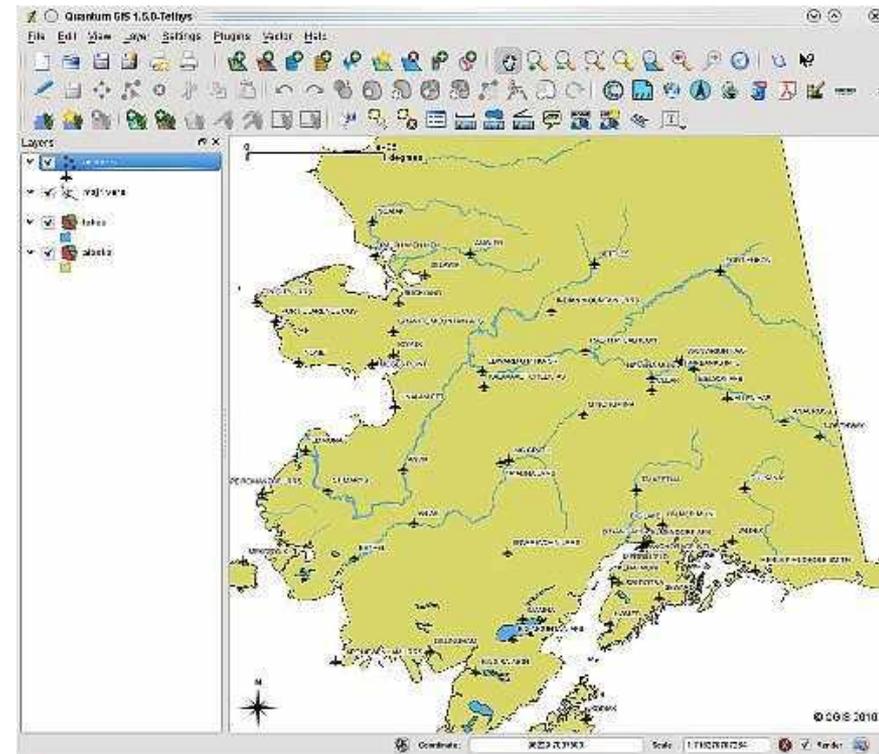- Website: http://www.esri.com/software/arcgis/index.html

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Geographical Information System
Quantum GIS? (open source)

Quantum GIS

- QGIS **provides data viewing, editing, and analysis capabilities**.
- Quantum GIS (QGIS) is a user friendly Open Source Geographic Information System (GIS) licensed under the GNU General Public License.
- QGIS **runs on Linux, Unix, Mac OSX, and Windows** and supports numerous vector, raster, and database formats and functionalities.
- Website: http://www.qgis.org/en.html

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Open your Mind through GIS: training in Open Source GIS

The University of Geneva in collaboration with UNEP/GRID-Geneva held a *continuing education training on Open Source GIS* in spring 2012.

This continued education course aims at presenting and discussing major open-source desktop GIS solutions.

More information is found in the brochure available on:
http://www.unige.ch/formcont/opengis.html

University Continuing Education

Open-Source GIS

March to June 2012

Open Source Software Collection

Open source software collection: **OSGeo Live**
URL: http://live.osgeo.org/en/index.html

about:
OSGeo Live provides bootable ISO-Images and Virtual Machines which allow users to try out fully-operational versions of popular Free Geospatial Software without the need to install a thing.

Finances & administration & human resources

BKG personnel: about 81.000 Euros / year

- **Office of Permanent Committee on Geographical Names**

  1 person, full time, about 35.000 Euros / year

- **Coordination of names activitiy at BKG**

  2 person, 30 %, about 10.000 Euros / year

- **Technical staff for administration of databases**

  1 person, 50 %, about 18.000 Euros / year

- **Technical staff for administration of web (gazetteer) service**

  1 person, 50 %, about 18.000 Euros / year

Finances & administration & human resources

BKG investments: about 20.000 Euros / year

- **Database (hard- and software)**

  2 databases, updates per year for 5.000 Euros / year

- **Server (hard- and software)**

  1 server update per year for 5.000 Euros / year

- **IT-specific training**

  2 person, about 10.000 Euros / year

Volunteered geographic information and crowd sourcing

Some future trends are mentioned as follows:

[...] Crowdsourced data will push National Mapping Agencies towards niche markets.

Crowdsourced content will decrease cost, improve accuracy and increase availability of rich geospatial information.

Progress will be made on bridging the gap between authoritative data and crowdsourced data, moving towards true collaboration.

There will be an accelerated take-up of Volunteer Geographic Information over the next five years.

Within five years the level of detail on transport systems within OpenStreetMap will exceed virtually all other data sources and will be respected and used by major organisations and governments across the globe.

Source: Global Geospatial Information Management (GGIM), www.ggim.un.org

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- **Open source**
- **Platform Independence**
- **Architectural Interoperability**

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