

COMMISSION 3 IN PROGRESS

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INTRODUCTION TO SPATIAL INFORMATION MANAGEMENT

Soon no one will think of spatial data as something special. In time with integration of spatial information in the various information systems, there will be a strong need for people skilled in Spatial Information Management. That is people who can manage the technical and organisational aspects of combining data and in turning raw data into understandable information.

PRESENTATION OF COMMISSION 3

Commission 3, Spatial Information Management, is responsible for: 1) Management of land, property and hydrographic information and the related processes, procedures and resources, 2) Spatial Data Infrastructure - data models, standards, availability and legal aspects, management of spatial knowledge, 3) The impacts on organisational structure, business models, professional practice and administration, 4) Management of spatial information supporting sustainable development.

Information on the Commission and its activities and results are available on the Commission homepage on <http://fig3.boku.at>.

FUTURE ACTIVITIES

Since 1998 the main activities has been dedicated to Spatial Data Infrastructure. Even though it is very essential topics it is only a limited part of issues related to Spatial Information Management.

Technological developments such as remote sensing, real time positioning, personal navigation, Internet, hand held devices and broadband network offers the citizens, public administration and business possibilities for access to information and services that was unforeseeable a few years ago.

Citizens will expect that all information, independent of where it is stored, will be available at their fingertips present as well as historical versions 24 hours a day. The geographic based information systems will directly or indirectly influence the way that *the public administration* is organized. The users will take it for granted that it is possible to combine data from different sources. To handle this situation the *geo information business* has to be reorganized. We will see new business units based on partnership and strategic alliances. Some of these business units will be global.

CHALLENGES

The chairmanship has formulated "Experiences and Visions" concerning Spatial Information Management (see <http://fig3.boku.at>). An examination of "Experiences and Visions" shows that the sub-statements can be divided up into six groups: infrastructure including data modelling, modelling, geo-visualisation, organizing models and business models and education and training. There are a several sub-themes in each of the six groups. To support a holistic development of spatial information you need to concentrate on a few activities.

To make information systems usable for ordinary users it will become necessary to include knowledge or access to knowledge in the future spatial information systems. The time has come to speak about "Spatial Information and Knowledge Management".

In "Experiences and Visions" you can find advice on the various aspects of *National Spatial Data Infrastructure (NSDI)*. It has to be stated that *data modelling* and *defining semantics in spatial data* are very fundamental topic within NSDI.

Presentation of data requires decisions on how to select and how to manipulate data. In this context *model generalization* and *cartographic generalization* are the hot issues.

The last area is *modelling* of our physical surroundings combined with tools for *analysing* of the models and changes introduced into the models.

Visualization of spatial information on a screen is very different from visualization on a map. There is a strong need for examples and standards for visualization of spatial information, *geo-visualization*.

As soon as it is possible to have access to different sources with spatial data and the related knowledge it is time for reengineering the involved *organisation*.

At the same time it is a part of the *organisational framework* to co-operate on NSDI

Changing from a situation where the national mapping agencies almost had a monopoly to a marked with a widely distributed supply chain demands new *business models*, new pricing algorithms, clarified rules for copyright, standardized product specifications and access to Meta-data and it demands *partnership and strategic alliances* between the possible players in the spatial information arena.

There is a need for people with qualifications such as management, standards, data models, meta data, access to data, intellectual property right, copyright, pricing of data and organizational developments. Beside there is a need for knowledge on analysis, modelling, visualization, visual communication etc.

The new technology offers completely new possibilities for *training and education*. Distance learning and training are strategic issues in developing countries.

THE FUTURE ROLE OF COMMISSION 3

After a period with very much focus on National Spatial Data Infrastructure it is time for going deeper into some of the other elements within the framework of Spatial Information Management: modelling, geo-visualization, organizing models, business models and education and training.

My recommendation should be to concentrate the energy of the Commission on organisational and business models combined with aspects of NSDI, modelling and geo-visualization and spatial knowledge management.

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