

Commission 3 Work Plan 2002-2006

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ABSTRACT

This paper gives an overview of the FIG Commission 3 work plan for the years 2003-2006 as well as an introduction to the concept of Spatial Information Management. The different Working groups and activities for the period 2003-2006 are listed.

The paper contain examples on ongoing developments and future activities, and a strong emphasizing of the importance of topics like data modelling, geo-visualization, e-government, e-commerce, capacity building and Spatial Knowledge Management.

At the end it is highlighted that the Commission role as strategic adviser on developing trends within Spatial Information Management. The potential partners, customers and beneficiaries of the work of Commission 3 and the interlinked network are mentioned.

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1. FIG COMMISSION 3 AND THE CUSTOMER

1.1 Information as value

How do surveyors and customers with spatial information? Customers experienced information as value – especially Spatial Information is used for decision-making. They are accessing different components and services in digital form. How could they manage it? Is it by a coordinated approach of the information providers or is it much more a demand driven initiative, notwithstanding all the hindrances?

Improving the services provided by surveyors as experts in Spatial Information means that the surveyors - instead of the customers - have to manage aspects of **merging, transforming, overlaying, filtering information**. In addition a sound infrastructure also needs some harmonization for optimised common use of services and data provided. These are opportunities for surveyors to contribute to a sustainable development with tools for decision-making based on Spatial Information.

We all are aware about the new challenges and opportunities, which came up as a result of our fast changing **information society**. The work plan of Commission 3 focuses also on the consequences of the changing demand on infrastructure and the surveyor's impact on a service oriented "**knowledge economy**".

Changes are of guided by a process of trial and error which are needed for developing sustainable infrastructure and business models. Commission 3 will highlight the state of the art of SIM and the process of permanent improvement of the information provided by surveyors?

FIG-Commission 3 will initiate and support research and development on all levels and disseminate information and knowledge to FIG, the commissions, the delegates, the member associations, and COM3 will closely cooperate with sister organizations and international aid-organizations.

Commission 3 will continue to collect and provide information on the ongoing developments and developing trends in the different member countries through the national delegates and other involved in the commission network, from presentations during FIG working weeks and the annual meetings, from best practise studies, and from monitoring the developments in different countries and regions.

On background of the FIG strategic plans and fully considering the inter-commissions-coordination within ACCO the COM3-Work Plan until 2006 the following work plan has

been developed. The working plan comprises sub-working plans for working groups, plans for annual meeting, communication plans etc.

2. SPATIAL INFORMATION MANAGEMENT

National **Spatial Data Infrastructure** was one of the key words of the recent years. The incoming challenge is to focus on elements within the concept of **Spatial Information Management**: e-government and e-commerce, digital administration, modelling, geo-visualisation, organizing models, business models and education and training. The successful integration of these elements into the Surveyor's profession will lead to a sustainable contribution of surveyors to the society.

3. CORE BUSINESS OF COMMISSION 3

The intention of Commission 3 for the following years is:

- Bringing awareness to successful SIM approaches in the "Information Age" by showing good practice like: "reliable spatial information for better decision making". Decision makers on all levels expect reliable spatial information and not only maps
- Share good practice on the managerial processes and infrastructure needed for handling data, using information and sharing knowledge.
- Encouraging decision-makers for a more extensive use of spatial information also within good e-government and e-commerce.

4. WORK PLAN 2003-2006

Commission 3 –Working Groups (WG) focuses on contribution of spatial information for sustainable development. The elements for achieving this goal are on national level with contributions to "**e-Government**"; on international level with experience: "**state of the art of SIM**", best practice and clarification on needed infrastructure for GSDI: "**SIM infrastructure**". The WG on "**Knowledge in SIM**" provides the overarching principle for sharing and transferring knowledge achieved.

4.1 Working Group 3.1 e-Government and e-Citizen

SIM as facilitator for IT based administration and even integrator of components for a Spatial Information Infrastructure within an Information society.

- Tools for services for decision makers and citizens in participatory democracy
- Government - business– customers: relations and activities,
- Integration and cooperation in distributed environment
- SIM and LBS in mass market - Consequences of a "Black Box" approach,
 - Individual vs. business in SIM
 - Mobile society
 - Making geo-database suitable for mobile phones
 - Improve basic references (geo-referencing, transport-internet)

4.2 Working Group 3.2 – State of the art of SIM

This working group will focus on the development and state of the art of SIM. One of the output will be a worldwide analysis and best practice of institutional structures as well as contents of data bases. The following topics are listed in the Work plan:

- Institutional structures and Spatial Information Infrastructure
- Data available and Spatial Data Infrastructure
- Interdisciplinary and cooperation of different jurisdictions, disciplines, P-P-P
- Impact on organizing and business models as well as on procedures: layers of administrations

As a result of this Working group COM3 will provide:

WEB-Inventory of best practice in regarding “State of the art of SIM” and metadata base about SDI.

This WG will also contribute to a joint activity with COM5 and 7 on “Low Cost Surveying Technology and Techniques for Developing Countries”.

4.3 Working Group 3.3 – SIM infrastructure

This WG focusing on demand regarding infrastructure needed for a sound use of spatial information:

- NSDI / GSDI: Spatial Data + Information Infrastructure
- modelling, geo-visualisation
- Legal aspects in SIM
- Interoperability, interdisciplinary and cooperation of different jurisdictions, disciplines and the public private partnership
- Standards Network on international (ISO/TC 211, OpenGIS Consortium, etc.) and on regional level
- Cooperation with ISO/TC211 and OpenGIS Consortium

4.4 Working Group 3.4 – Knowledge Transfer in SIM

This joint WG with Commission 2 integrates the resources of FIG Com.2 and 3 using the experiences in knowledge transfer on one hand and the know-how of spatial information management on the other hand.

- Where to get knowledge, training etc.
- Not only data are needed and information is not yet knowledge. Infrastructure is changing quite fast, but also methods of training are changing because the “half-life-time” of knowledge becomes shorter.
- How to bridge tangible information with intangible knowledge.
- Cooperation between sister organizations, optimizing regional structures

5. CO-OPERATION WITH SISTER ASSOCIATIONS AND INTER-COMMISSION LINKS

The Commission 3 is fully aware about the role within a network. The following organizations are considered as pillars of this network:

- Cooperation on GSDI with GDSI and EUROGI
- Commission 3 contributes to 6th GSDI Conference in Budapest, 16-19 September 2002
- Cooperation on international standards on spatial data with ISO and OPENGIS
- Especially promoting implementation of ISO TC211.
- ISPRS, especially with ISPRS-Commission IV-Spatial Information Systems and Digital Mapping (<http://www.commission4.isprs.org/>)
- ICA - International Cartographic Association: <http://www.icaci.org/>
- International Geographical Union, Commission on geographical Information Science (<http://www.hku.hk/cupem/igugisc/>)

Joint WG of Commissions 2 and 3: Knowledge in SIM

The aim is to integrate the resources of the members of FIG Commission 2 and 3 using the experiences of professionals in knowledge transfer from one side and the know-how of spatial information management (SIM) from the other side.

Break knowledge down into its basic components: Knowing *why* represents having a basic understanding of the reasons for facts, conditions, job responsibilities, client requirements, etc. Knowing *what* means knowing the cause of a problem or condition. Knowing *where* provides a spatial reference to understanding. Knowing *how* is the critical element for problem solving, the knowledge of how to get something done. Knowing *when* provides a temporal reference and is closely tied to timing and opportunity development.

Joint WG of Commissions 3 and 5 including a joint Workshop on e-Government , Mobile society and Location Based Services

This workshop will bring awareness to the way we go and the consequences:

- SIM in mass market - the “Black Box” approach
- Individual vs. business in SIM
- Mobile society
- Making geo-database suitable for mobile phones
- Improve basic references (geo-referencing, transport-internet)

Joint Symposiums of Commissions 7 and 3 on

- good practice on applying SIM
- on integrating advanced technology, jointly with Commission 7

Co-operation with United Nations agencies and others

1. FAO www.fao.org/
2. UN-Cartographic section: www.un.org/Depts/Cartographic/english/htmain.htm
3. UN-ECE-WPLA www.unece.org/env/hs/wpla/welcome.html
4. UN-ECA
5. ISPRS-COM4 and www.oepe.org
6. PCGIAP Permanent Committee on GIS Infrastructure for Asia and the Pacific,
7. EUROGI European Umbrella Organisation for Geographic Information,
8. PC-IDEA Permanent Committee on SDI for the Americas,
9. GSDI, including a FIG-COM3-position paper for GSDI-conference Budapest
10. ISO-TC-211 and OGC

5.1 Active involvement of regions

Commission 3 will actively involve underrepresented regions like Africa, Latin America, Middle East, and Asia by exchanging information. Commission will try to reduce conference fees in order to enable or to encourage regional participation and try to raise money for funding participation of groups like students. Commission will also encourage participation by using e-mail and web.

5.2 Communication and Information delivery

Commission 3 has an ambitious approach on management of information and communication. This includes an active Commission3 home page, linkages to other relevant information and events in order to keep commission delegates and all FIG members informed about the work of the Commission.

6. FUTURE ACTIVITIES

Even though Spatial Data Infrastructure is an essential topic it is only a part of issues related to Spatial Information Management.

The accelerating technological development gives the users possibilities for access to information and services unforeseeable a few years ago. Even though the implementation time is very dependent on local conditions we will see implementations as well in developed as in developing countries. The actual developing trends will be illustrated examples of best practice.

7. CONCLUSION

The new technologies imply new methods for data capture in digital form. There will be more data - with lower costs per unit - to be used in public and private administration as well as in business. These data will seek for tools to manage, model, integrate for decision making and to visualize the results.

Real time and post processed surveying will be increasingly important parts of the *Spatial Data Infrastructure*.

Personal navigation is another hot issue. The online access to spatial information can already now provide individualized information as part of Location Based Services.

The Internet as a information network will grow together with the mobile services provided through hand-held devices. Spatial information will be available independent of space and time. All that has great influence on development of organizational and business structures, but also the way of visualizing spatial information will change a lot. Not only is this setting new challenges to all those who manage and serve geospatial data but it also means that it is necessary to reconsider database architectures and technologies on a much shorter cycle than ever before.

And last but not least the Commission should continue to act a strong strategic adviser on ongoing developments within Spatial Information and Knowledge Management for the FIG Council, the other FIG commissions, the member associations, the Unit Nations, the World Bank, the Aid Agencies etc.

BIOGRAPHICAL NOTES

Dipl.-Ing. **Gerhard Muggenhuber**
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1983 diploma in Civil Engineering (Surveying) at the Technical University of Vienna

1983-87 GIS development for FM within a licensed surveyor's consortium

1991-93 completed postgraduate studies on Geo-Information.

1991-96 Secretary General of the Austrian *Austrian Society for Surveying and Geoinformation*

1993-97 he was head of the BEV-"*cadastre-planning department*"

since 1997 he is head of BEV-"*international affair*"

1996-2001 active member of bureau of the *Working Party on Land Administration (WPLA)*, an advisory body on land registration matters to the UN-ECE in Geneva.

1998-2002 Vice-chairman of *Commission 3 (Spatial Information Management)*.

Gerhard Muggenhuber has some 20 years of professional experience in management of cadastre and Geo-Information in Austria as well as an international consultant. He took part on several international initiatives on Information Management and Cadastre to be initiated in Eastern- and Central European countries.