

FIG XXII CONGRESS
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**NATIONAL REPORT
OF HUNGARY**

1998-2002

Hungarian Society of Surveying, Mapping and Remote Sensing

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Introduction

Hungary has been a member of FIG for decades, and the Hungarian National Committee (HNC) has been represented in all the nine commissions. The Hungarian delegates have been always playing an active role in the organisation.

In Hungary and in several neighbouring countries, the slogan of this congress “Developing the Profession in a Developing World” can be interpreted more generally, because it concerns not only land surveying, but the whole social environment. In the recent period of the Hungarian land surveying, the current political and economic changes claim fast and well-prepared action from every member of our profession. This is necessary to keep track with the international trends of our profession and also follow the changes in our society and economy.

This is a great challenge also for the Hungarian Society of Surveying, Mapping and Remote Sensing, being the only professional-social organisation of the Hungarian land surveyors. The Society has to support its members in this new situation, in the age of new and unknown tasks (such as privatisation, compensation or establishing the new bases for the registration of land and property data.) At the same time, we have to continue the activities coming from our FIG membership, thus our experts should stand the demands of a changing age.

The Hungarian Society of Surveying, Mapping and Remote Sensing tries to give help to its members in solving the tasks, and organises the work of the national departments in accordance with the FIG technical commissions by enforcing these trends.

General information about the Hungarian Society of Surveying, Mapping and Remote Sensing

The most important and characteristic details are given in the following about the national professional organisation of Hungary.

1. The professional society changed its name. The new name in Hungarian is:
Magyar Földmérési, Térképészeti és Távérzékelési Társaság (MFTTT)
and in English:

Hungarian Society of Surveying, Mapping and Remote Sensing

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2. The tables show the number of members of the Hungarian Society of Surveying, Mapping and Remote Sensing, classified by employment and principal specialisation.

Employment	Number	%
Employed by land registration sector	126	24
Self-employed/in private practice	107	20
Teaching	58	11
Employed by military service	8	2
Pensioner	145	28
Employed elsewhere	77	15
Total	521	100

Specialisation	Number	%
Positioning/measurement	31	6
Engineering surveys	125	24
Hydrography	5	1
Cadastral/land management	292	56
Spatial planning/development	42	8
Valuation/real estate management	10	2
Quantity and building surveying	16	3
Total	521	100

3. Name of the officials of the Hungarian Society of Surveying, Mapping and Remote Sensing are as follows:

Prof. Ákos Detrekői	President (1995-2002)
Ferenc Bartos	Secretary-General

4. The main bodies of the Society are:

- General Assembly
- Presidency
- Executive Committee
- Control Commission

Professional sections:

- Land Surveying and Land Consolidation
- Photogrammetry and Remote Sensing
- Land Management
- Land Surveying Expertise
- Geodesy
- Cartography
- Engineering Geodesy
- Topography
- Seniors' Club

Professional committees:

- Regional Development and Environmental Protection
- Education and Youth
- History of the Profession
- Spatial Information Systems

5. Name of the officials of the FIG Hungarian National Committee (HNC):

Dr. Mihály Ágfalvi President of FIG HNC
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Piroska Zalaba	Secretary of FIG HNC
László Boldizsár	Delegate of Commission 1
Dr. Béla Márkus	Delegate of Commission 2
Dr. Szabolcs Mihály	Delegate of Commission 3
Mikós Marek	Delegate of Commission 4
Dr. Gyula Graczka	Delegate of Commission 5
Gábor Ponicsán	Delegate of Commission 6
András Osskó	Delegate of Commission 7
Dr. Eszter Hóna	Delegate of Commission 8
Dr. Zoltán Forgács	Delegate of Commission 9

Commission 1: Professional Practice, Organisation and Legal Systems

Commission delegate: László Boldizsár

An important task of the special field of land administration is the regulation of land surveying, land administration and mapping on legal level. The regulations, laws affect the following professional fields:

- ◆ The *computerisation of land registration* needed an appropriate legal background. Taking up this demand, a new law on land registration has been passed by the Parliament. The Ministry of Agriculture worked out the executive decree (ministerial act), and it came into force in January 2000.
- ◆ The *digital geodetic base map* is an essential element of these legal rules. The related changes of legal rules enables the land offices to handle both legal and digital cadastral map data of the land registration by computer.
- ◆ The *modernisation of the rules on the preparation of geodetic basic maps relating new instruments and technologies* is inevitable, to increase the accuracy and reliability of data. The Law on Land Surveying and Mapping was issued in October 1996 to provide legal background for the surveying and mapping activities. Basic aim of the new act is to ensure that maps series, covering the total area of the country is available. These map series should serve as a basis of real property registration on the one hand, of geographic information systems, of defence, as well as of various economic, scientific and social subjects.
- ◆ Besides, the questions of *standardisation* should be mentioned. Special committees were formed for working on the development of standards and

norms. As a result of their work, the Hungarian Digital Base Map Standard was put into operation in 1996. It was updated in 1999.

- ◆ Important changes of our profession are reflected in the *number of private surveyors*. By the end of 1992, there were more than a hundred significant offices engaged in land surveying and a few hundred private surveying enterprises were registered. The importance of the work within this Commission will grow together with the increasing influence of the private sector. The execution of the National Cadastre Programme demands clear regulation considering the increased protection of entrepreneurs' interests and the adaptation of international practice.

Within the reorganised Hungarian Engineers' Chamber, mostly the Surveying and Mapping Section co-ordinates these experts organically. Though this organisation defined its purposes and activities with a little difference only, compared to those of our Society, we endeavour to build up a good working relationship and co-operation with them.

Commission 2: Professional Education and Literature

Commission delegate: dr. Béla Márkus

Educational strategy

The land administration is under radical changes aiming to serve the various users with land related information. New legal and professional regulations and respective standards are needed in digital mapping, information technology and information services in general. An action plan for a Hungarian Spatial Data Infrastructure and the National Information Strategy has been discussed by expert panels for the Hungarian Government for several years. Now, the Prime Minister's Office of the Hungarian government has decided to pursue the formulation of an Information Society Action Plan and a National Spatial Data Strategy. One of the key factors of the progress is staff development. The new services need highly qualified staff involved in Land Administration in different institutions of Hungary. However, the lack of developed education and training facilities within the country in the specific areas of Land Administration and Land Information Systems could hinder the projects' success.

Alongside the technical projects, there have been a number of educational initiatives. A Strategic Committee for Staff Development in Land Offices was formed by the Ministry of Agriculture and Regional Development (MARD), Department of Lands and Mapping (DLM). It was recognised by the Committee that human resources were the most important aspect of service delivery in Land Administration. When the speed of change in information technology is placed alongside the transition changes of land ownership and measurement within Hungary, a need for education and training has become vital. The educational system must be more responsive to the customer and, with this in mind, a system of open and, very often, distance education was proposed.

Success factors in staff development

- Improving management skills,

- Strengthening work efficiency and service-oriented character,
- Providing the land management sector with competitive national working power,
- Supporting the spread of new forms of work,
- Preparing land administration for participation in the information society,
- Providing opportunity for lifelong learning,
- Creating motivation for continuous training.

Professional development

A TEMPUS SDiLA (Staff Development in Land Administration) project was prepared and delivered in the last period (1998-2001), looking forward to the needs arising from the opportunities, which now exist or are under preparation in Hungary in connection with the EU accession.

There were three SDiLA project objectives. First, the creation of a programme of education for continuing professional development for Land Administration in Hungary based on existing programmes developed under the previous OLLO TEMPUS project and other projects in Hungary and the EU. These will utilise the existing Land Administration infrastructure. To these will be added new programmes for higher management and a set of programmes for all levels of Land Administration focusing on organisational issues, skills and matters pertinent to EU entry. In seeking to achieve these objectives, the project developed a core base of knowledge in land administration matters, the *Knowledge Pool*, which can be used in a flexible manner as a part of staff development programme tailored to individual's requirements. By building on the highly successful OLLO (Open Learning for Land Offices in Hungary) Structural Joint European Project, the project created an even more flexible and widely applicable staff development resource that can be used by individuals from many civil service disciplines. The provision of such a resource is essential for adequate staff development to support staff preparing for Hungary's accession to the EU and the consequent demands this will place upon them. The SDiLA TEMPUS Institution Building project improved the structure and developed 3 vocational short courses, and a senior management course in land administration.

Educational Metadata

Metadata will be crucial in implementing these strategic elements. Whilst learning units themselves form the building blocks of networked and inter-connected environment, metadata are required to connect the units and allow them to interoperate. Metadata are required to describe what learning units look like, how to build a learning route from them, what, if any refinements or value-adding operations have been carried out on a unit. What services can a tutor/learner request from a server in a networked environment, and what parameters should the teacher/student send to the server to request the service.

The Scientific Commission of Geodesy at the Hungarian Academy formed a working group on professional education. One of its most important results is the meta-database containing all the Hungarian professional higher educational institutes teaching geomatics. It was recommended that the following categories of

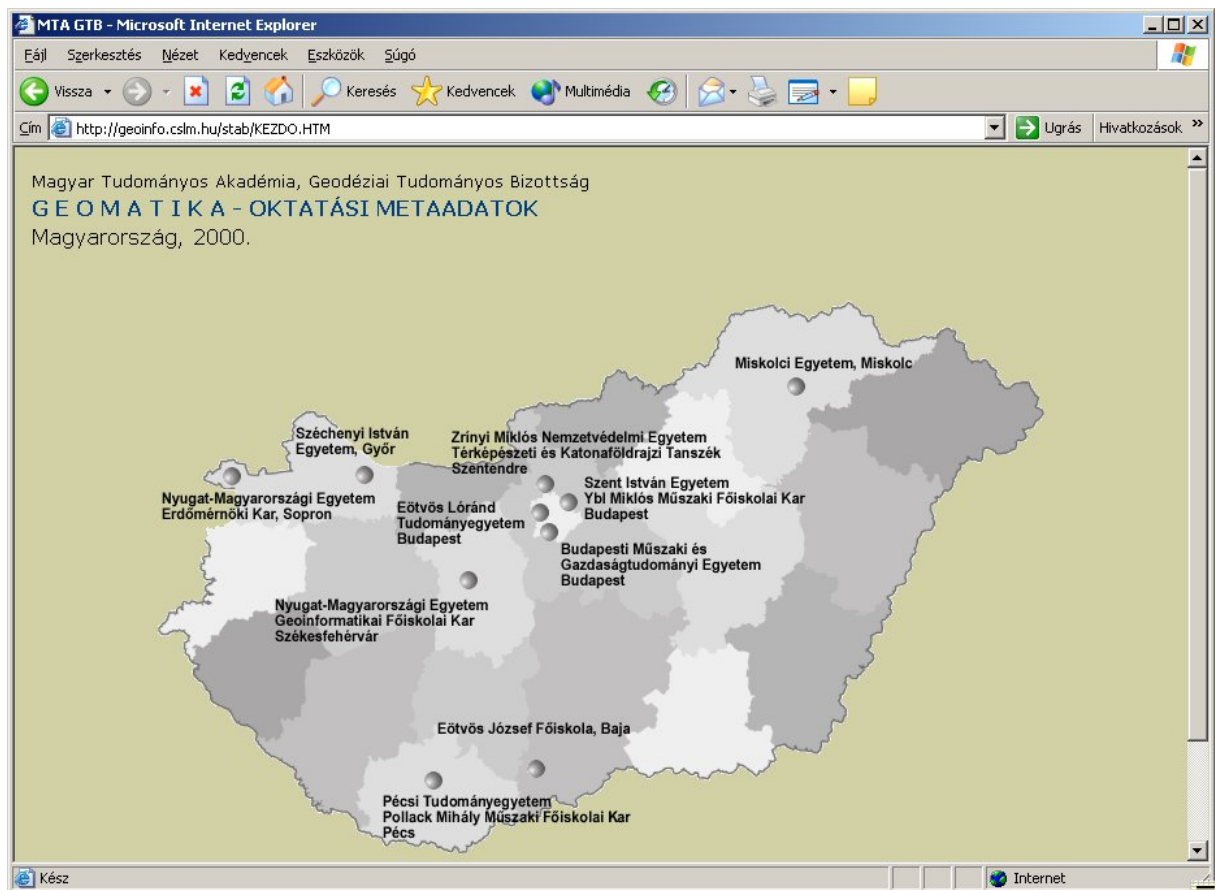
descriptors, which are presented in a logical order, be mandatory for any educational resource being indexed:

- general information on the resource itself,
- semantics of the resource,
- pedagogical attributes,
- technical characteristics,
- conditions for use,
- meta-metadata information.

Examples of optional categories are as follows:

- annotations.
- physical data of the represented educational resource.

The meta-database is under development. The data are available via Internet on the following address: <http://geoinfo.cslm.hu/stab>



Homepage of the Hungarian Educational Meta-database on Geomatics

1. GENERAL INFORMATION

1.1 Identification:

1.2 Title:

1.3 Objectives:

1.4 Description:	Lectures, Practicals, Literature
1.5 Learning level:	
1.6 Type:	
1.7 Lecturer:	
1.8 Tutor:	
1.9 Time:	
1.10 Methods:	
1.11 Assessment:	
1.12 Language:	
1.13 ECTS credits:	
2. ADDITIONAL INFORMATION	
2.1 Prerequisites:	
2.2 Relations:	
2.3 Keywords:	
3. META-META	
3.1 Author:	
3.2 Last modified:	
3.3 Language:	
3.4 Verified:	

Metadata description of modules

Commission 3: Land Information Systems

Commission delegate: dr. Szabolcs Mihály

The Hungarian Group for FIG Commission 3, headed by dr. Szabolcs Mihály, general director of the Institute of Geodesy, Cartography and Remote Sensing has been active since the last FIG Conference, held in Brighton (UK), 1998. As a top of our activity we organised a seminar and an annual meeting in Budapest, in 1999, cited by Commission 3 as the best seminar for many years. The Commission 3 considers this meeting as the starting point of its successful development in the last four years.

Participation in FIG Conferences and Annual Meetings

20-24 October 1999, Budapest

Annual Meeting and Seminar on Spatial Information Management

The Institute of Geodesy, Cartography and Remote Sensing was in charge for organising the conference, supported by the Department of Lands and Mapping of Ministry of Agriculture and Regional Development, the Hungarian Association of Surveying, Mapping and Remote Sensing and the College of Surveying and Land Management.

There were 83 participants joining this event, 31 out of them came from different countries outside Hungary. 35 papers gave the possibility to share experiences and knowledge between the participants.

The theme of the seminar was Spatial Information Management. This was the first seminar after Commission 3 has changed its name to Spatial Information Management. Within this framework there was special focus on "Standards", "Capacity Building" and "Metadata".

After the seminar, the Commission 3 annual meeting followed with the participation of the Commission members and 18 delegates.

This seminar was successful not only from technical point of view, but also in social sense, getting together activities and building personal contacts.

The abstracts of the seminar were published in a printed Proceedings and the papers in full length on CD, which were distributed between the participants, other members of Commission 3 and interested persons.

22-26 May 2000

FIG Working Week, Prague

For Commission 3 26 participants from 14 countries joined this meeting. Hungary was represented at the meeting. Mrs. Enikő Kovács gave a National report on "Questions of National Spatial Information Structure in Hungary". This paper gave details on the government strategy concerning geoinformatics and the coming Hungarian National Spatial Information Infrastructure. The copies of the paper were distributed at the meeting.

4-7 October, 2000, Athens

Spatial Information Management - Experiences and Visions for the 21st Century"

Spatial Information Management, Experiences and Visions for the 21st Century was the theme of the Commission 3 seminar and annual meeting 2000 in Athens, Greece from 4 to 7 October. 99 registered participants from 17 different countries participated in the seminar. The Hungarian Association was represented at the meeting, the Hungarian view on "National Spatial Infrastructure in Hungary" was further discussed.

6-11 May, 2001 Seoul

FIG Working Week 2001: New Technology for a New Century

The FIG Working Week 2001 was hosted by the Korean Confederation of Surveyors. The theme of the conference was "New Technology for a New Century". About 1000 participants attended the conference. In the conference there were more than 30 technical sessions. The Hungarian FIG Committee delegated 4 professionals. Two of them represented the Hungarian Commission 3 (dr. Szabolcs Mihály and Enikő Kovács). They presented three papers:

- Szabolcs Mihály, Katalin Tóth: Promising steps towards an international on-line data service
- Enikő Kovács, Szabolcs Mihály: The Hungarian National Spatial Data Infrastructure
- Szabolcs Mihály: Two Standards on Digital Maps as Part of the Hungarian NSDI

All papers and abstracts (in htm and pdf formats) are available on the FIG web site: www.fig.net.

The proceedings of the technical conference are available also as hard copies. The abstracts are printed in a book (277 pages) and the papers are published in a CD-ROM. Both items are available at the Korean Confederation of Surveyors.

Dr. Szabolcs Mihály also gave a short country report during the annual meeting of the Commission 3.

2-5 October, 2001, Nairobi

International Conference on Spatial Information for Sustainable Development

The International Conference on Spatial Information for Sustainable Development took place in Nairobi, Kenya. FIG Commission 3 was in charge for organising that meeting. The conference was a first step on the way to open the activities for Africa. The FIG, the Institution of Surveyors of Kenya (ISK) and the United Nations Centre for Human Settlements (Habitat) organised the conference. More than 500 participants from about 40 countries participated in the conference and about 100 papers were presented. From Hungary, Ms. Piroska Zalaba, secretary of the Hungarian FIG Committee and Ms. Enikő Kovács, Hungarian delegate of the FIG Commission 3 joined the conference. The Commission 3 also held its annual meeting during this conference, where Enikő Kovács gave a short country report. She also gave a presentation on the conference with the title: Results and Experiences of TAMA, a Land Consolidation Project in Hungary. The proceedings of the conference are available in a printed book (about 800 pages, printed in Nairobi, Kenya) and also on the FIG web site in htm and pdf formats (www.fig.net).

Standardisation of Digital Topographic Database

The Institute of Geodesy, Cartography and Remote Sensing together with the Topographic Office of the Hungarian Defence Forces prepared a Standard on digital topographic database in 1999-2000. During developing the standard all the Hungarian data owners, data users and data capture organisations represented themselves in 3 nation-wide panel discussions, altogether about 180 person, partly organised by the FIG's member Hungarian Association of Surveying, Mapping and Remote Sensing (MFTTT). As a result of this process, the second volume of the map database standard was elaborated, discussed, accepted and issued by the GI-standardisation committee TC-818 of the Hungarian Body of Standards:

MSZ 7772-2:2001 Digital Maps: Part two: Definition of Digital Topographic Data Base ("DITAB-Standard"), harmonised with the CEN and ISO geoinformation standards.

The MSZ 7772-2:2001 Standard on Digital Topographic Data Base gives prescription of the 1:10 000 scale/resolution classical topographic map, providing database for later cartographic portrayal (the cartographic portrayal will be later standardised as "Digital Cartographic Data Base, DIKAB for different smaller scales). The data handling unit is the 1:10 000 scale map sheet.

The following chapters describes the conceptual model of the standards:

- Terminology
- Data model of the digital base map
- Position (spatial referencing): Map projection system (Hungarian EOV), Reference system (Hungarian Datum, HD-72), Height system (Baltic Sea level, orthometric).
- Classification of objects and thematic structure
- Spatial schema: Geometrical primitives, Topological primitives, Spatial view, Explanatory texts.
- Attributes

- Relations: between nodes, between edges, faces and rings
- Data quality: Source, Extent of application of data, Quality of geometric data, Quality of attribute data, Actuality, Completeness, Consistency of data, Technology for data collection, Data protection, Verification.

The annexes of the DITAB-Standard:

- Tables of objects of the digital topographic data base
- Tables of attributes of the digital topographic data base
- Transformation from the Hungarian reference and projection system to the EUREF'89 system
- Sheet nomenclature of the Unified Hungarian Mapping System EOTR
- Metadata describing the digital topographic data base.

Activities on the FIG Agenda 21

The FIG Agenda 21, the Agenda for implementing the concept of Sustainable Development in the activities of the International Federation of Surveyors and its member associations was endorsed by the General Assembly in Seoul. We translated the Agenda into Hungarian, and dr. Szabolcs Mihály presented it at the Biannual conference of the Hungarian Association of Surveying, Mapping and Remote Sensing, 2001 in Szombathely.

Activities in connection with the FIG General Information

The FIG leaflet about the tasks, activities, role and work of FIG was translated to Hungarian language and is under preparation to publish it in the monthly journal of the Hungarian Association of Surveying, Mapping and Remote Sensing.

Visit of Markku Villikka, Director of FIG Office

In September, 2001 Markku Villikka, director of FIG Office visited Hungary. The Institute of Geodesy, Cartography and Remote Sensing organised a meeting between heads of the Hungarian FIG Association and Markku. Markku gave a short overview of the work of the FIG Office and the preparatory works of the following FIG events, while the Hungarian delegation (Mihály Ágfalvy, president of the Hungarian FIG Association, Péter Winkler, vice-director of the Institute of Geodesy, Cartography and Remote Sensing and Enikő Kovács, operative member of the Hungarian Commission 3) outlined the Hungarian professional activities and results.

Other activities:

Enikő Kovács, operative member of the Hungarian Commission 3 participated in the international Mt. Kenya expedition of the Commission 3 organised after the conference and annual meeting held in Kenya, October 2001. The aim of the tour was to reach the Pt. Lenana, 4995 m and to develop a team spirit between the members of the Commission 3. The tour was a big experience and a great success.

List of the Hungarian papers

Vilmos Bognár - Szabolcs Mihály: Administrative Boundary Data Services (ABDS) - an EU project and its Hungarian aspects

Gábor Remetey-Fülöpp - Pál Lévai: PANEL GI - pan-european relations
Zsolt Sikolya: METATER - data management issues of meta data services in Hungary
Gábor Uhrin: Implementation of a nation-wide metadata server
Piroska Zalaba: TAKARNET - an extranet for land administration
Szabolcs Mihály: Introduction to the Institute of Geodesy, Cartography and Remote Sensing
Gyula Iván: Hungarian Land Office Information Infrastructure
Szabolcs Mihály - Tamás Vass: New technologies at the Central Data Archive
Tibor Király - Béla Márkus - Szabolcs Mihály: Land Information Services on the Web
Gábor Csornai: Crop Monitoring by remote sensing
Szabolcs Mihály: Hungarian Base Map Data Standard, Technical Rules and Regulations
Enikő Kovács - Tamás Prajczner: Comparison of metadata standards - a proposal for Hungarian Core Metadata Standard
László Niklasz: Strategy of staff development in Hungarian Land Offices
Béla Márkus: Continuing staff development to improve Land Information Services
Simon László: Multimedia-based TAKAROS training
Gábor Remetey-Fülöpp: LISARD - Land Information Service for the Agriculture and Rural Development and related EU harmonisation actions in Hungary
Zsolt Faragó: BIIR - Cadastral Information System for Budapest Land Office
Szabolcs Mihály-Enikő Kovács: Questions of National Spatial Information Structure in Hungary"
Szabolcs Mihály-Enikő Kovács: National Spatial Infrastructure in Hungary
Szabolcs Mihály- Katalin Tóth: Promising steps towards an international on-line data service
Enikő Kovács- Szabolcs Mihály: The Hungarian National Spatial Data Infrastructure
Szabolcs Mihály: Two Standards on Digital Maps as Part of the Hungarian NSDI
Enikő Kovács: Results and experiences of TAMA, a land consolidation project in Hungary

Commission 4: Hydrographic Surveying

Commission delegate: Miklós Marek

The change of the political regime resulted in the reorganisation of various government offices. Thus water conservancy and environmental protection fell under joint management. At the same time, our members who work in the field of water conservancy must organically adjust to environmental protection, too.

For the time being, within water conservancy (National Supervising Authority of Water Conservancy) the establishment of spatial information system is in the stage of reorganising data acquisition in a way, which enables us to process the data digitally. This can be the basis of a system in the future. Some of the water conservancy authorities have already started to create such regional systems in their spheres of activities, and data collecting is going on in geographical information system. They are waiting for the national digital basic map and digital terrain model for converting their data. Naturally, they know that processing the large amount of water management data and filling up the system take a long time. In some of its works, the

Water Management Scientific Research Centre (VITUKI) also applied data, collected before in GIS system and also modelling was solved in this form.

In the environment management, gradual establishment of spatial information systems is planned. Within the framework of a Dutch co-operation project, a database registered in GIS system was taken over and its filling up was started for some areas of Hungary, in certain themes (Genasys system within PHARE). In addition, local initiatives were taken at several regional supervising authorities.

The usage of aerial photographs have a significant past in water management. They are used for planning and surveying the effects of existing constructive works.

The application of remote sensing in environment management is not wide-spread yet, but some experiments were performed.

Space photographs were used in several areas for analysing purposes and for territorial limitation of certain effects (bordering of Balaton, Szigetköz, flood areas, polders, endangered areas, examinations of water quality etc.).

In both branches, hardware part of the computerised background is available in practice, and it can be made suitable for the establishment of GIS system, creation of databases or processing shots of remote sensing with relatively small expenditure. On the other hand, software is not unified; there are occasional developments of various quality and purchases from various sources.

The instruments of remote sensing can be found at water management. The aeroplanes of the Water Management Air Service equipped with various photographic systems had several normal (aerial photographs, thermo recordings) and experimental flights (radar systems). A self-developed image processing system operates In VITUKI, with limited possibilities of use.

The draft versions of both the Act of Environmental Protection and the Act of Water Management have been prepared and they will be presented for review to the government and the Parliament very soon. The two ministries harmonised the two acts already in the preparational phase. (Other acts and legal rules such as the Land Act, Forestry Act, building rules, Construction Act etc. can still influence them.)

Commission 5: Survey Instruments and Methods

Commission delegate: dr. Gyula Graczka

The Hungarian Committee of FIG Commission N^o5 specialists has been extensively working in the following areas of the instrumentation problems:

- metrological problems of calibrations
- evaluation of directives for calibration laboratories
- inauguration of national calibration baseline for electronic distance meters
- traceability of GPS measurements to international meter standard

In cooperation with the subcommittee for „Measurement and Quality” of the Scientific Commission for Geodesy our committee has arranged yearly working sessions and conference meetings for the resolutions of above topics. Following the

activities of international geodetic community and the recommendations of FIG Com. N°5 in this areas we issued several resolutions for the Hungarian specialists in the subject. In order with the recommendations of our committee several instrument calibration laboratories have been accredited during the past years.

By courtesy of our Finnish colleagues the national baseline at Gödöllő for EDM calibrations has been re-measured, by their Väissäala interference comparator. The baseline is legally accredited and opened for public use.

Our committee led several discussions about the feasibility of the calibration of GPS receivers, however the problem is not yet resolved, and continuing to be under further discussion.

A new subject of Metrology has been introduced in the academic curricula of Miskolc University for better understanding of measurement and evaluation problems of scientific, engineering and legal metrology.

According to the decision of the Scientific Commission for Geodesy our committee has taken responsibility to complete the digital catalogue of historical geodetic instruments in Hungary.

Commission 6: Engineering Surveys

Commission delegate: Gábor Ponicsán

The political and economical changes in Hungary had a negative effect on investments in the past few years. The international recession reduces the foreign investment interest, but we also have to be careful not selling the valuable lands and assets of our country. At the same time, dynamic development can be seen, market economy started to evolve gradually.

In such a situation, surveying, especially construction-related engineering survey has got only very few significant tasks. The economic restructuring is naturally affecting also our profession, so the question is, what our real strength is in this period of transformation. Do we have adequate professional strength and capacity for managing the surveying tasks of several large investments?

A special task of engineering survey work is the construction of circular highway around Budapest.

Construction and modernisation of the country's national highways and railroads are under way.

Geodynamic network was prepared with both GPS and traditional method around the nuclear power station in Southern Hungary. The experiment shows that by establishing a complete satellite system, there is a hope for developing a local GPS mobile investigation networks.

Engineering survey tasks are affected significantly by the fact that through the EU Phare Aid Programme, the Hungarian land and property registration system and its further maintenance will be fully computerised. In this programme, every county and district land office received PC equipment for alphanumeric keeping of property records. Also the use of land information systems (LIS) in county land offices is planned in the PHARE programme, to be realised in the near future. The LIS is vital for engineering survey as well.

At present, the creation of information systems of public utility services, local governments and large industrial establishments is hindered by the fact that the cadastral base map - which forms the geometrical basis of the systems - is available in traditional, manual form only. The public utility services and local governments as clients do not have enough funds to order the digital cadastral base map, and land offices do not have money for this purpose either. This is a deadlock situation, which hinders the creation of a so-called AM/FM-type information system for engineering survey purposes.

In the 1990s, the public utility services of Budapest started AM/FM developments based on PC.

The Budapest Electric Works' subsidiary information system included the low voltage and public lighting network, supporting structures, armatures, connected wiring, and bulbs. The primary aim of the electric experts is to create the facility management data bank, so the scale of the basic material used for preparing the original map was 1:4 000. The loading of the medium voltage data into the information system was completed in this period.

Budapest Water Works' AM/FM system (HALIR) is also primarily an FM system. It is supposed to assist operation, network record keeping, and dispatch services. Its map basis is also of scale 1:4 000.

Budapest Gas Works uses scanner technology. Beside the basic map content, the distribution network is recorded in pressure ranges. The scale of the basic map is 1:500, which means that the so-called divisional detailed maps are processed.

In Hungary, a separate base map was prepared for city public utilities, the so-called public utility base map at scale 1:500. It was actually magnified from the cadastral map at scale 1:1 000, and the contents were supplemented. The basic material of this map was produced by traditional method; it is a good basis for creating public utility register and AM/FM systems for local governments.

Several other utility service providers are also dealing with the development of information systems in the fields of electricity, gas, water supply as well as sewerage.

Local governments also initiate several developments, but we do not have a system yet, which would cover a whole town.

In this area it is a significant step forward that the National Board of Technical Development (OMFB) decided to support 15 local governments selected in a competition, in creating their AM/FM systems.

Commission 7: Cadastre and Rural Land Management

Commission delegate: András Osskó

Commission 7 was one of the most active commissions between 1998 and 2002, also in Hungary.

Mr. András Osskó, the Hungarian delegate has been acting as Chairman of the Working 3, Land Markets since 1998.

The Working Group 3 prepared a detailed working plan for the period 1998 –2002 and performed accordingly.

The aim of the program was to collect sufficient information – possibly from all regions of the world – about the legal and institutional framework and other conditions influencing land market functions. For this purpose, two series of questionnaire were issued and sent to the national delegates of Commission 7 and other professionals. Evaluating the answers, we tried to make conclusions on the factors influencing the land markets positively or negatively.

Two papers will be presented during the Washington Congress 2002 on the results of the activity of the Working Group. One of them summarises the four-year activity of the Working Group; the other one is an analysis on the land markets of Western and Central Europe.

In 2000, during the 7th Annual Meeting of Commission 7, held in Hamburg, the Working Group 3 organised a one-day international open symposium: “Land Markets in Western Europe and Eastern Central Europe”. The meeting, chaired by A. Osskó was a great success, more than 66 delegates attended. Although there was a strong focus on land markets in Central Europe and particularly on the German experience, there was an international range of presentations from Africa, Western Europe and Australia.

Since 1998, A. Osskó, the Hungarian delegate has participated in all FIG Working Weeks and assemblies of the Commission 7, and also presented papers.

As an appreciation of his activity, A. Osskó was invited to the FIG-UN joint Working Week held in Bathurst in 1999, resulting in the Bathurst Declaration “Land Administration Infrastructures for Sustainable Development”. This publication has become a basic document of land management. After the Bathurst Working Week, Mr. Osskó presented a paper also in Melbourne at a conference with similar title.

In line with FIG strategies and guidelines, in the last four years we have regularly informed the Hungarian professionals about the FIG activities and new challenges of the land surveying profession, in solving which FIG would help us. Several papers were presented in national conferences, workshops about these topics; also various articles were published in the Hungarian professional monthly bulletin “Geodesy and Cartography”.

The joint FIG-UN Bathurst Declaration was translated into Hungarian, and this significant document was discussed in several papers.

‘Agenda 21’, published by FIG was also translated into Hungarian.

This is our intention to support the activity of Commission 7 further on. The Hungarian Association for Geodesy, Cartography and Remote Sensing (MFTTT) nominated Mr. András Osskó as Deputy Chairman of Commission 7 for the period 2002-2006.

Commission 8: Spatial Planning and Development

Commission delegate: Eszter Hőna

General overview of the period 1998-2002 in Hungary

In the last four years the main task for Hungarian spatial policy was to prepare the planning system to join the European Union. This preparing was solved by participating in Phare and Sapard programmes, which helped to develop the Hungarian planning system in two direction:

- to adopt the experiments of the programme-making, based on the EU fund systems
- to establish EU-conform institution system.

The rural development got bigger role in Hungarian regional policy. (Sapard programme)

Activities of Hungarian FIG Commission 8

Terms of Reference for Hungarian FIG Commission 8 according to the International FIG Commission 8 are:

- regional and local structure planning
- urban and rural land use planning
- planning policies and environmental improvement
- urban development and implementation
- public–private partnership (PPP)
- environmental impact assessment (EIA)

National activities

Hungarian FIG Commission 8 played attention above mentioned terms of reference during the different planing works, and organised seminars to discuss the problems as follows:

Physical plans of specially prioritised areas: Recreation Area of Lake Balaton, Agglomeration Area of Budapest.

- land use planning with improvement environmental issues (protection of city green-belt or traditional culture)
- conflict within long term planning and short term economic interest of municipalities (sale of settlements-owned lands)
- expropriation of lands for development motor way and civil veto (PPP)

Sapard Plan of Hungary and regional rural development strategic and operative programmes

- improving methods of rural development planning
- establishing information system of rural development

National agro-environmental programme as the main element of the rural development

Land consolidation programmes based on complex rural development plans

- making pilot projects, to develop methodology

How to involve EIA és SEA into spatial planning procedures

- developing methodology
- organising workshops involving foreign experts.

International activities

We had no personal contact with FIG Commission 8 and we could have no participate any international programme in this period.

Commission 9: Valuation and Management of Real Estate

Commission delegate: Dr. Zoltán Forgács

Appraisal activity in Hungary is done partly by authorities and partly in the private sector. As an authority only the Local Duty Offices are entitled to define the value of the properties if their ownership change hands. To appraise the value of properties falls within the only competency of the government official staff of Duty Offices. The value data are stored in a database belongs to the Duty Offices. The database – excepting judicial matters – is not public. It is not available for not governmental official appraisers because of the protection of personal data and rights. But this database is relevant at any official procedure. The Duty Offices have the only right to revise the stated value in the documents. In the appraisal works at Duty Offices are used the Market Value System only.

In the private sector appraisal activity can be done at land agency and realtors. Because the official appraisal data are not available for them, they create their own database and can communicate to each other. They also have professional associates. If it is needed at appraisal works they use Market Value System and Proceed Based System and Reproduction Cost System, too.

Licensed appraisers have to be on the official list of appraisers registered by the Local Governments, or have to be in possession the membership of judicial experts at Ministry of Justice. No school-system organised education for appraisers in Hungary. One can be get the licensed graduation by special accredited courses. In Hungary the Postgraduate Institute at Technical University of Budapest has many decades' standing tradition on education for appraisers and realtors. One can became as an appraiser by the special skilled property engineer course, too. I am the staff member of both courses mentioned above to perform Land Registry and Official Surveying. For the students special exercise books written by the lecturers and published by the University are available. In addition there is available in public trade the two-volume Practical Property Guidebook published by Verlag Dashöfer Publisher, covering all the topics of the courses. The authors of the book are the lecturers of the courses. The publisher updates the Publication with a CD insert 2-3 times a year.

To get high level professional knowledge for appraisal is possible in Hungary, but the problem of access for relevant official property value data is unsolved for decades. However to know the relevant data for professional appraisal works has primary importance.

About the work of FIG 8 Committee we get only a few information. About five years ago we got an invitation to a symposium in India on a high participation fee. I have published the invitation in journal *Geodézia és Kartográfia*, but as far as I know nobody took part on the conference neither as a speaker nor as a participant.

Budapest, April, 2002

Dr. Mihály Ágfalvi
President of FIG HNC

Ms Piroska Zalaba
Secretary of FIG HNC