

International Federation of Surveyors  
Fédération Internationale des Géomètres  
Internationale Vereinigung der Vermessungsingenieure



ANNUAL  
**REVIEW**  
2010



## Handover Ceremony in Copenhagen, Denmark 25–26 November 2010



**President Stig Enemark making his Farewell Speech on FIG achievements in 2007–2010 at the Handover Ceremony.**

The formal Handover Ceremony between the FIG Councils 2007–2010 and 2011–2014 as well as between Commission chairs took place at the FIG Headquarters in the IDA Building in Copenhagen 26 November 2010. At the Handover Ceremony President **Stig Enemark** handed over the President's Chain of Office to the incoming President **CheeHai Teo** from Malaysia.

The Handover Ceremony was attended by about hundred representatives from all over the world representing all continents to recognise the achievements of President Enemark and his team over the four-year period of administration 2007–2010. The festive ceremony was preceded by a farewell dinner at the San Marco restaurant in Frederiksberg, Copenhagen. The busy week included also number of meetings of the FIG Council, new Commission officers (ACCO) and with participating delegations focussing especially on the future FIG conferences.

The Handover Ceremony started with music including songs of *Carl Nielsen*, *Giuseppe Verdi* and Italian folk songs. The relaxed and professional atmosphere throughout the event was created by **Robin McLaren** from Scotland, UK who acted as the master of ceremony.

President Enemark focused in his keynote address and farewell speech on the FIG Agenda and Achievements in 2007–2010. Just to mention few of the highlights there is the increased co-operation and achievements with the World Bank, UN-Habitat and GLTN and FAO and in total 20 new publications in the FIG publication series.

Greeting addresses were given by long-term contributors to FIG in Denmark: President **Henning Elmstroem**, the Danish Association of Chartered Surveyors; General Director **Jesper Jarmbaek**, KMS; and Dean **Eskild Holm Nielsen**, Aalborg University. The addresses



**FIG President Stig Enemark (2007–2010) together with the new President CheeHai Teo with the President's chain of office and Honorary Presidents Robert W. Foster and Juha Talvitie who assisted in the ceremony.**



**Commission chairs receiving applause for a well implemented work.**

## Greeting from the President

By Mr. CheeHai Teo, President of the International Federation of Surveyors

from the FIG community were given by Vice President **Matt Higgins** (2007–2010); Dr. **Chryssy Potsiou**, Chair of Commission 3 (2007–2010) and Prof. **Paul van der Molen** on behalf of the FIG membership.

President Enemark received thanks, appreciation and honour from delegates and representatives all over the world. The speakers emphasised like President Enemark the key role of sound land administration and management in this regard. President Enemark summarised that FIG is facing a time of change with three directions: From land measurement to land management, from cadastre to land governance, and from local to global. *“No development will take place without the footprint of the surveyor.”*

A new book *“Land Administration for Sustainable Development”* with a substantial contribution from Prof. Enemark was given to all participants thanks to ESRI that had published the book. The role of corporate members has been crucial in the success during the last years. At the Handover Ceremony platinum corporate members were presented by **Keith Hofgartner** from Trimble.

In his invited keynote presentation Dr. **Juha Talvitie** from Finland, FIG President 1988–1991, explained how the design, the foundation and the construction for such a truly global organisation have been developed over last twenty years. One very important change is that the Council is no longer related to the country hosting the next FIG Congress but is now directly elected by the General Assembly with Stig Enemark being the first elected FIG President.



**Paul van der Molen, Matt Higgins and President Stig Enemark.**



**“Engaging the Challenge:  
Enhancing the Relevance”  
is the motto for FIG in 2011–2014**

It is recognized that humanity currently faces a series of challenges including adequate food and shelter, climate change, disaster risk reduction, rapid urbanization as well as environmental degradation and increasing poverty chasm. Sustainable national and economic development, as well as good governance of land, natural and built environment remains fundamental. In engaging these challenges wherever we may be is essential as we seek to enhance the significance and relevance of our Profession and Federation.

2010 was the last year in the term of office of the FIG Council under the leadership of President **Stig Enemark**. His term made *“Building the Capacity”* its key priority and applied the theme of *“flying high and keeping our feet on the ground”* in the sense that capacity is needed to meet the challenges of the times. As President of the leading international NGO on land issues, Prof. Enemark and FIG is now well known and highly respected with the United Nations and the World Bank. Together with his Council, Prof. Enemark has laid a solid foundation for future Councils to develop the profession further. The surveying profession has an important role to play in facing the challenges of the times including equitable access to land, water and other natural resources as well as food and shelter. Together with climate change and environmental crises and its impacts, these challenges will remain in the FIG agenda in the coming years.

Prof. Enemark’s term culminated in the very successful XXIV FIG Congress where more than 2,200 participants from 100 countries converged on Sydney, Australia last April. The event clearly showed that FIG has become a truly international organization and the efforts of past Councils to bring FIG into a globalised 21<sup>st</sup> century has been accomplished. One very clear result of this period is the excellent co-operation that FIG has with the United Nations and the

World Bank, a relationship that FIG have been striving and building over the last decade. The last four years definitely belong to a most energetic and successful period in the history of FIG. The twenty publications is a further testimony. The outcome of this period will impact not only the future of the Federation but also the whole surveying profession, the land professionals and society at large.

When reading the evaluation report of the work plans of 2007–2010 we will readily note that FIG has been able to fulfill all her ambitious plans. On behalf of the Council and the Federation, we must extend our thanks and appreciation to Prof. Stig Enemark for his leadership of the Federation over the past four years. It was an illustrious Presidency. We must be pleased that the 34<sup>th</sup> General Assembly in May 2011 recognized Prof. Enemark’s contribution to the Federation by appointing him an Honorary President of FIG.

Looking ahead, the current Council and I are positioned to lead and serve the Federation and the Profession. We are mindful of the immensity of the task and the many expectations are not lost on us. Together with the chairs of FIG’s ten Commissions, two Networks and four Task Forces as well as the directors of FIG’s two Permanent Institution and the President of the FIG Foundation, whom I regard as the wider leadership of the Federation, we commit ourselves and endeavour to bring the Federation and the profession-of-our-choice to new heights during this term of office. We know that this can only be achieved through mutual respect, unselfish contribution, working with one another and commitment. Our vision is that we become a Profession, armed with knowledge and best practices, extending the usefulness of surveying for the benefit of society, environment and economy, increasingly positioned in significance and relevance, next door to everywhere.

This Annual Review describes the many achievements that FIG, the Council and Commissions have been able to implement over the last year. This annual review focused on the activities in 2010 but being the last year of the four-year term of office also summarises many of the projects successfully implemented over the last four years. I want to express my thanks to all those who have contributed in one-way or another to the various events, projects and publications.

Yours sincerely,

**CheeHai Teo  
President**

## XXIV FIG Congress in Sydney, Australia 11–16 April 2010 Facing the Challenges – Building the Capacity



Aboriginal welcome at the Opening Ceremony.



Governor Marie Bashir, Warwick Watkins and Stig Enemark with the statue of James Meehan, one of the surveying pioneers in Australia at the Opening Ceremony.



Plenary session on spatially enabled societies: Warwick Watkins, Santiago Borrero and Abbas Rajabifard.

The XXIV FIG Congress **Facing the Challenges – Building the Capacity** held in Sydney Australia 11–16 April 2010 turned out to be the biggest FIG congress ever. With more than 2,200 participants from 100 countries it gathered the biggest attendance to an FIG event. Among participants there were 120 students and 250 accompanying persons.

The technical programme with more than 1,000 offered papers out of which more than 700 were presented in Sydney was a big hit. In totally there were more than 150 technical and flash sessions, workshops and special seminars. The total number of presented papers exceeded 800. The participants packed both plenary halls and technical session rooms at the Sydney Convention and Exhibition Centre in Darling Harbour in the heart of Sydney.

The opening ceremony at the SCEC gathered almost 2,000 people to listen to the opening speeches and the aboriginal welcome to the country presented by representatives of the Cadigal tribe. Their presented included the “songlines” that connect people and land and mark routes. The welcome addresses were made by Mr. **Jonathan Saxon** who represented SSSI on behalf of President **Michael Giudici**. Other welcome greetings were presented by Mr. **Tony Kelly**, Minister of Lands and Congress Director **Paul Harcombe**.

FIG President **Stig Enemark** stated in his opening address that “*the key challenges of the new millennium are climate change; food shortage; energy scarcity; urban growth; environmental degradation; and natural disasters*”. All these issues relate to governance and management of land. This means that it relates

directly to each surveyor and the national surveying associations.

The official opening from the Australian hosts was made by Hon. Dr. **Marie Bashir**, Governor of New South Wales. In her opening remarks she stated: “*I have been increasingly interested in and appreciative of the contribution of surveyors – the modest and often unsung heroes of civilization.*” Dr. Bashir also unveiled the statue of **James Meehan**, one of the surveyor pioneers.

The opening keynote address was given by Dr. **Tim Flannery**, one of Australia’s leading thinkers and writers who stated that “*surveyors are the custodians of an enabling technology that is critically important to our future. Surveyors should take a leading role, not only in monitoring climate change, but in explaining it to the broader public. You operate well in harsh conditions.*”

In the first plenary session out of four that focused on the FIG achievements 2007–2010 President Enemark summarized the most important activities that have been taken during the last four years. This impressive list covered not only the FIG events and joint events with partners like the World Bank, FAO and UN-HABITAT, but it included also several projects and publications.

The second plenary session focused on spatially enabled society. Dr. **Abbas Rajabifard**, President of GSDI, identified in his keynote presentation that “*spatially enabled society is a scenario where a society manages their information spatially by using a spatial component.*” In support of this Mr. **Santiago Borrero**, President of PAIGH, talked about the need for strong links between politics and the numerous disciplines of the surveying profession to enable better land governance. Finally, Surveyor General **Warwick Watkins**, NSW presented a world class best practice approach to this by using the State of New South Wales as an example.

The third plenary session focused on the big challenges facing surveyors and society as a whole focussing on climate change, natural disasters, urban growth, and land governance. This session included two presentations from major FIG partners in the United Nations. Dr. **Paul Munro-Faure** from FAO presented the principles of good land governance based on the FAO studies and guidelines. Dr. **Mohamed El-Sioufi** from UN-HABITAT spoke about climate change and sustainable cities where the Global Land Took Network provides a partnership in response to many of the key issues. Dr. **Daniel Fitzpatrick** (Australia) gave a presentation on addressing land issues after natural disasters.

In the last plenary session on technological futures the speakers included Dr. **Mary O’Kane** and Mr. **Ed Parsons**, who discussed the Google Earth and internet approaches. FIG Vice Presi-

dent **Matt Higgins** discussed the increasing role of positioning techniques. All plenary sessions attracted full halls with more than 1,000 listeners.

The plenary sessions were complimented by after lunch talks. These invited sessions were in the programme for the first time. They were very popular and offered excellent overviews on the technological futures. Presentations were made by Mr. **Johannes Schwarz** from Leica Geomatics that was also the titanium sponsor of the congress, Mr. **Brent Jones** from ESRI (platinum sponsor) presented how GIS and modern technology can response to natural disaster like the recent catastrophe in Haiti. The first after lunch talk was given by a real legend within surveying profession Prof. **John McLaughlin** who spoke about the Fourth wave of property reform.

The technical programme ran for four days with 10–12 parallel sessions. Because of the huge number of papers, some papers were presented in new series of flash presentations. Technical sessions were very well attended and attracted more listeners than at previous congresses. In many sessions there were only standing places. The biggest problem was in selecting which session to follow. About 10 per cent of both offered and of accepted papers had gone through a peer review process.

In addition to normal technical sessions some invited session and commission plenary sessions were arranged. E.g. in the session on land governance in support of the MDGs Mr. **Keith Bell** from the World Bank, and the session on launching the Social Tenure Domain Model (STDM) with Dr. **Clarissa Augustinus** from UN-HABITAT.

The Director General Forum was organised for the first time at the FIG Congress after meetings in Stockholm and Eilat. Director Generals or leaders from almost 50 national mapping and cadastre agencies gathered in Sydney to discuss the issues that all national mapping and cadastral agencies are facing these days.

The UN millennium development goals challenges relate at the regional level very much to the small island developing states especially in the South Pacific region. This is why it was obvious to organise a special full day workshop with invited representative from the region to discuss these issues and how to build the capacity of the land professionals to deal with these challenges. The meeting was attended by about 50 representatives from small island states.

The pre-conference workshop on the history of surveying gathered almost 150 people including a range of former and present Surveyor Generals.



**The exhibition was well attended and was a networking place for the participants over the week.**

As tradition to the FIG congresses technical tours were organised to offer something for all commissions. They offered good insight to get familiar with Australian surveying especially in Sydney and New South Wales.

The exhibition at FIG 2010 filled in one hall at the SCEC. Altogether about 50 companies were presenting their services. The exhibition offered a good overview on the latest technologies and development both with instruments and software. The three exhibition days were very busy and well attended. When lunches and coffees were served in the exhibition hall it allowed also excellent opportunities for networking. The titanium sponsor was Leica Geomatics and platinum sponsors ESRI and Trimble as well as to Land and Property Management Authority, New South Wales.

The welcome reception was held at the recently renovated Sydney Town Hall that offered impressive surroundings for the get-together party. The highlight of the social events for the national delegates was the reception that Governor Marie Bashir hosted in the Government House. The other social events included the FIG Foundation Dinner which this time was a cruise in the astonishing Sydney harbour. The Gala Dinner in Darling Harbour attracted more than 650 delegates with their accompanying persons to an Australian type banquet.

The congress finished with a closing ceremony where President Enemark summarised the main outcomes of this biggest FIG event. He emphasised that *“land professionals need to increase their role in developing sustainable*

*cities. They need to take a more engaging and leadership role in the area of climate change. The partnership with UN agencies is the key to recognition and enhancing the status of the global surveying community – leading to more effective solutions to global land issues.”*

The General Assembly also accepted to publish a Sydney Declarations as a result of the congress.

At the closing ceremony President Enemark was acknowledged for the successful congress together with the local organising committee, especially Congress Director **Paul Harcombe**, acting President of SSSI **Jonathan Saxon** and chair of the steering committee **James Curnow**.



**Red shirt army receiving their well deserved thanks at the closing ceremony.**

## FIG General Assembly 2010, Sydney, Australia 11 and 16 April 2010



President Stig Enemark and President Elect CheeHai Teo.



President Stig Enemark making his President's report and presenting the achievements over the last four years in front of the FIG world map.

The FIG General Assembly 2010 was held in conjunction to the FIG Congress 2010 in Sydney, Australia. The General Assembly took place in two sessions. The first session was attended by 54 member associations and the second one, in which the elections took place by 67 member associations (66 members were able to vote). Both sessions were attended by several other members (affiliates, academic members and corporate members), honorary members and observers so that the total number of participants was more than 300 in both sessions.

The biggest interest in the agenda was election of the next FIG President and new Vice Presidents. In the election for the President the first vote took place between three strong candidates who were all current FIG Vice Presidents. In the first vote **CheeHai Teo** from Malaysia got 27 votes, **Matthew Higgins** from Australia 24 and **Iain Greenway** from United Kingdom got 15 votes. In the second round Vice President Teo got 33 votes and Matt Higgins 32 votes. So Teo CheeHai was elected as the next FIG President in a very close race. It shall be mentioned that Teo CheeHai is the first FIG President from Asia. His term of office is from 1 January 2011 to the end of 2014.

The General Assembly further elected two new Vice Presidents for term of office 1.1.2011–31.12.2014. After Teo CheeHai was elected for the next President also a third post for Vice President for a two-year period was opened. The election took place between three candidates one post at a time. In the election for the first Vice President Dr. **Chryssy Potsiou** from Greece won over Prof. **Rudolf Staiger** on the second round. For the second Vice President Prof. Staiger got most votes. As result Dr. Potsiou and Prof. Staiger Germany were elected as new Vice Presidents for term of office 1.1.2011–31.12.2014 and Dr. **Dalal S. Alnaggar** from Egypt for term of office 1.1.2011–31.12.2012.

The General Assembly appointed new chairs for the ten FIG Commissions (2011–2014). All current chairs elect were appointed and because there were no further candidates the

appointment took place by acclamation. The new chairs are: Commission 1: Ms. **Leonie Newnham**, SSSI, Australia; Commission 2: Prof. Dr. **Steven Frank**, ACSM, USA; Commission 3: Prof. **Yerach Doytsher**, ALSI, Israel; Commission 4: Dr. **Michael Sutherland**, CIG, Canada; Commission 5: Mr. **Mikael Lilje**, ASPECT, Sweden; Commission 6: Dr. **Gethin Wyn Roberts**, ICES, United Kingdom; Commission 7: Mr. **Daniel Roberge**, CIG, Canada; Commission 8: Mr. **Wafula Nabutola**, ISK, Kenya; Commission 9: Prof. **Frances Plimmer**, RICS, United Kingdom; and Commission 10: Mr. **Robert Šinkner**, CUSC, Czech Republic

The General Assembly appointed also a new chairperson for OICRF, FIG permanent institution where Mr. **Christiaan Lemmen** from the Netherlands replaced Prof. **Paul van der Molen**, who has been chairing OICRF for more than 15 years. Ms. **Kate Fairlie** from Australia was appointed as chair to the Young Surveyors Network and Mr. **David Martin** from France as chair to the Standards Network for 2011–2014.

Prof. **Pedro Cavero** from Spain, Prof. Paul van der Molen from the Netherlands and Mr. **Helge Onsrud** from Norway were all appointed as Honorary Members for the long term work in FIG. They have all been – among other duties – Commission chairs and have carried out key roles in task forces among other.

For the host of the next FIG Congress 2014 there was a tight competition between two very strong candidates. In the voting Kuala Lumpur, Malaysia got 35 votes while Istanbul, Turkey was able to collect 31 votes. The General Assembly thus admitted the next FIG Congress to PEJUTA to host it jointly with FIG in Kuala Lumpur, Malaysia. It will be the first time when the FIG Congress will be organised in Asia. Earlier Asia has only been the host for Working Weeks and regional conferences.

FIG membership is still increasing. The number of member associations is now 103 including following five new member associations: Albania Association of Geodesy; Ordre des Géomètres Experts du Benin; Geodetic Association of Herceg-Bosnia (Bosnia and Herzegovina); Cyprus Association of Valuers and Property Consultants; and Nepal Institution of Chartered Surveyors.

Ten new affiliate members were approved in Sydney: Afghan Land Consulting Organization, ALCO, Afghanistan; Italian Society of Photogrammetry and Topography, SIFET, Italy; Swiss Federal Office of Topography, swisstopo, Switzerland; National Cartographic Center, Iran; Afghanistan Information Management Services (AIMS), Afghanistan; Cadastral Survey Bureau of Land Management, Dept. of the Interior (BLM), USA; State Geodetic Administration of

## Work Plan 2007–2010



Malaysian winning team in Sydney.



Commission Chairs 2011–2014 together with President Stig Enemark.

Republic of Croatia (DGU), Croatia; Survey of Israel, Israel; Ministry of Lands and Mineral Resources, Fiji; and Agency for Land Administration and Cadastre of Republic of Moldova.

Further three corporate members were admitted FIG membership: Geotrilho Topografia Engenharia e Projecto Ida, Portugal, Geoweb S.p.A., Italy, and Coordinates Magazine, India.

Number of academic members is now 89 after six new members: The National Research Institute of Astronomy & Geophysics, Geodynamics Department, Egypt; The College of Estate Management, United Kingdom; Brno University of Technology, Czech Republic; College of Technology, University of Houston, USA; Center for Soil Protection and Land Use Policy (Zentrum für Bodenschutz und Flächenhaushaltspolitik am Umwelt), (ZBF-UCB), Germany; and School of Rural Estate and Planning, Reading University, United Kingdom.

Three correspondents from Ethiopia, Eritrea and Peru were accepted to the end of 2010.

Other decisions of the General Assembly included the normal administrative issues like budget and reports from different institutions (permanent institutions, FIG Foundations and on co-operation with the United Nations and sister organisations.

Two new memorandum of understanding were signed between FIG and the Global Spatial Data Infrastructure Association (GSDI) and the Pan American Institute of Geography and History (PAIGH).

The end of the four-year administration means that many projects will come to an end by the end of this year. In Sydney eight major publications were launched. The General Assembly decided to accept that a congress declaration "Sydney Declaration" will be prepared and published as an outcome from the FIG Congress 2010.

### Work Plan 2007–2010 – Building the Capacity

#### Promoting and Enhancing the Role of FIG

- Professional development
- Capacity building and institutional development
- Global development
- Linking the global agenda and individual surveyors

#### Continuing and Enhancing the Dialogue with the Member Associations

- Promoting the benefits of being a member
- Increasing the membership base
- Ongoing implementation of the information and communication policy
- Establishing a forum for mapping agency chief executives
- Establishing a forum for corporate members

#### Promoting FIG as a Global Organisation

- Encouraging global representation in Council and commission officers
- Encouraging global distribution of and representation at FIG conferences
- Interacting with regional organisations and respecting cultural diversity

#### Responding to the Millennium Development Goals

- Developing an FIG policy on the MDGs in cooperation with the UN agencies and the World Bank
- High level FIG/WB conference in 2008 to promote the FIG global profile in this area

#### Revising the Conference Structure

- Even years: Major conference such as the FIG Congress or a major Working Week
- Odd years: Working Week and regional conference in partnership with the UN organisations
- Council initiated expert symposia on topical issues e.g. linked to national events

#### Empowering ACCO and the Commission Activities

- ACCO as a dynamic forum for strategic advice and professional development
- Enhancing the profile of the technical programme at the conferences including peer reviewed papers
- Establishing an online FIG journal
- Establishing Task Forces to deal with inter-commission activities and policy implementation

#### Sustaining the FIG Office Administration and Finances

- Administration
- Finance
- Meetings
- Events

## Commission Activities



Delegates at the FIG Commission 2 Professional Education Workshop at the University of East London, 26–27 August 2010.



Commission 2 technical tour at the workshop in London in August 2010.



Prof. Dr. Doytsher (third left) with members of the organising committee at the XVI Cadastral Week in Bogota, Colombia in September 2010.

The Commission officers met in 2010 in conjunction to the FIG Congress in Sydney, Australia and at the Handover Ceremony in Copenhagen in November 2010. At the congress all commissions had their annual or other administrative meetings. At the meetings organisation of FIG conferences, peer review process at the conferences and commission co-operation as well as preparation of the work plans for 2011–2014 were discussed.

### Commission 1 – Professional Standards and Practice

The FIG Congress 2010 in Sydney, Australia was the main activity of Commission 1 in 2010. Commission had six sessions, three of which were collaborative with other commissions. The other activities in Commission have been focused on the Standards Network and Young Surveyors Network.

### Commission 2 – Professional Education

The overall theme of FIG 2010 “Facing the Challenges – Building the Capacity” was fitting very much to the general aims of Commission 2. Within the 11 technical sessions more than 50 papers were presented. There was a roundtable on “Knowledge transfer and attracting young people to surveying”, jointly organised with ASIERA.

Commission 2 organised a Workshop on the “Trends in Surveying Education and Training” at the University of East London, 26–27<sup>th</sup> August 2010. This workshop focused on surveying education and in particular how educators around the world respond to changes in the survey profession and keep their courses relevant and stimulating for students. President **Stig Ene-mark** gave the opening address and presented an overview of surveying education in Europe. The meeting also saw the handover of the chair of FIG commission 2 from **Bela Markus** to **Steven Frank**. Commission 2 organised ten workshops or conferences during 2007–2010. In terms of changes in education, the growing emphasis on the provision of e-learning is clear and in January 2010 Commission 2 highlighted this in FIG publication on “Enhancing Surveying Education through E-learning” (no. 46).

### Commission 3 – Spatial Information Management

Commission 3 had main contribution in FIG Congress 2010 in Sydney. The specific annual Commission 3 Workshop in 2010 focused on “Land and Information Management. A Decade after the Millennium” and was held in Sofia, Bulgaria 15–17 November 2010. The Workshop was organised by FIG Commissions 3 and 7 and the Chamber of Graduated Surveyors of

Bulgaria. Interesting aspects such as land management in a passive and/or purposive manner; the need for fast infrastructure construction and compulsory purchase of land and compensation; GIS and crowdsourcing techniques for urban management; and the need for harmonization of land administration institutions and legislation to facilitate cross border finance and property loans in the digital era were addressed.

Co-chair of Working Group 3.2 **Hartmut Müller**, Germany, made a presentation on at the 46<sup>th</sup> International ISOCARP Congress in Nairobi, Kenya, 22 September 2010.

Commission chair **Chryssy Potsiou**, Hartmut Müller, and **Yerach Doytsher**, incoming chair of Commission 3 made presentations on FIG publication 48 at the *SDI 2010 Conference* in Skopje, Macedonia FYROM in September 2010.

**Paul Kelly**, Chair of WG 3.2, Hartmut Müller and Yerach Doytsher made a presentation of FIG publication 48 at the *GSDI-12 Congress* in Singapore in October 2010.

Commission chair Potsiou made a presentation at the *2<sup>nd</sup> International Training Course for Surveyors*, organised by the Consiglio Nazionale Geometri and Geometri Laureati in cooperation with Geoweb in Rome, 20 September 2010.

Commission 3 supported the Conference on “*Citizens Rights to Real Property*” held in Chisinau, in Moldova 30 November – 1 December 2010. The objectives included increased awareness of the role of the donor/lender in emerging economies and attention to the impact of the real property issues on the local economy.

Commission 3 is closely cooperating with UNECE Working Party on Land Administration especially on the issue of Informal Settlements and managing unplanned urban development in Europe. Through this cooperation Commission 3 contributed to compilation of the publication “*Self-Made Cities, In search of sustainable solutions for informal settlements in the United Nations Economic Commission for Europe Region*”.

Commission further supported the UNECE WPLA workshop on “*Spatial Planning to improve Security of Tenure in the UNECE Region*”, in Antalya, Turkey in October 2010 and presented the study on “*Informal Development in Europe: Experiences from Albania and Greece*”. As a result from cooperation with UN-HABITAT a publication on “*Informal Urban Development in Europe. Experiences from Albania and Greece*” was published.

Commission has also supported the *SDI 2010* conference in Skopje in September 2010 organised by Geo-SEE (South-East Europe Research Association on Geo Sciences). Commission attended also the “*International Land Management Symposium*” in Hannover, Germany in May 2010.



**FIG Commission 3 chairs Prof. Yerach Doytsher (2011–2014) and Prof. Chryssy Potsiou (2007–2010), and Prof. Bashkim Idrizi, Chair of the Local Organising Committee at the International Conference on Spatial Data Infrastructures in Skopje, Macedonia FYROM in September 2010.**



**Angel Yanakiev, Chairman of Chamber of Graduated Surveyors giving his welcome address; Prof. Chryssy Potsiou, Commission 3 chair and András Osskó, Commission 7 chair, at the Joint Meeting of FIG Commission 3 and 7 Information and Land Management – A Decade After the Millennium in Sofia, Bulgaria in November 2010.**

## Commission Activities



Participants at the Commission 3 and 7 workshop in Sofia in November 2010.



Workshop participants with young surveyors in the first row in Sofia in November 2010.



Participants at the FIG Commission 5 and 6 Workshop on "Innovative Technologies for an Efficient Geospatial Management of Earth Resources" in Kazakhstan in September 2010.

### Commission 4 – Hydrography

The Congress in Sydney, Australia was the main activity in Commission action plan in 2010. Commission 4 presented nine sessions, five of which were collaborative with other commissions – 5, 7 and 8. These joint sessions featured work on vertical reference frames (datums), positioning at sea, coastal zone issues, capacity building, competencies and the administration of marine spaces. A number of presentations were from peer reviewed papers and two sessions were offered as virtual posters in flash sessions. All of the sessions were well attended and in some cases were subject to standing room only. For the benefit of hydrographic-types a technical tour was organised by Sydney Ports and co-hosted by Sydney Ports, Newcastle Port Corporation and the Royal Australian Navy. In Sydney also the annual general meeting plus an executive meeting of commission officers were held.

Four newsletters as well as an *Insider's View* article on the Economic Benefits of Hydrography were published in Hydro International. In the FIG publication series two Commission 4 publications were launched: "Guidelines for the Planning, Management and Execution of Hydrographic Surveys in Ports and Harbours" (Publication No. 56) and "The Economic Benefits of Hydrography" (Publication No. 57) (published as a web-only document).

### Commission 5 – Positioning and Measurement

In 2010 the team of Commission 5 focused their energy on making the *FIG Congress 2010* in Sydney a success. Commission 5 facilitated in total over 30 technical and flash sessions and numerous discussion forums. Over 150 presentations were delivered in commission 5 and in joint sessions with Commission 4 and 6. In most Commission 5 sessions there was standing room only which meant on many occasions there were 100 plus delegates in attendance. E.g. Working Group 5.1 had two full sessions dedicated to standards, calibration and quality in measurement. Working Group 5.2 on reference frame in practice has been a key activity in Commission. At Sydney there were many interesting papers and presentations concerning the measurement, monitoring and modelling of the dynamic earth and also how users are using such information for many types of applications. Working Group 5.4 arranged sessions on GNSS CORS networks in partnership WG 5.2. The sessions covered geodetic basics, research topics as well as case studies. A special focus was on positioning infrastructure.

*WG 5.2 on Reference Frame in Practice* has been very successful in relationship with sister

organisations such as International Association of Geodesy (IAG) and the Permanent Committee for GIS Infrastructure Asia-Pacific (PCGIAP) on reference frame related projects such as the Asia Pacific Reference Frame (APREF) and the Global Geodetic Observing System (GGOS). **Mikael Lilje** also became the FIG representative on the Galileo Geodetic Reference Interface Working Group.

WG 5.4 *Global Navigation Satellite Systems* was successful in preparing FIG publication no 49 “*Cost Effective GNSS Positioning Techniques*” that was published in Sydney. **Neil Weston** and **Volker Schwieger** were the authors.

The WG 5.4 also supported German Aerospace Centre (DLR) to acquire kinematic GPS tracks that will be used to evaluate the TanDEM-X digital elevation model.

Commission 5 continued to work with Commission 4 and 6 on topics relating to deformation measurement, calibration of instruments, long range measurement, satellite and terrestrial imagery measuring techniques (in particular mobile and static laser scanning) and vertical datum / reference frame issues for hydrography.

Commission 5 maintained the developing relationship with various sister organisations such as the International Association of Geodesy (IAG) and the Permanent Committee for GIS Infrastructure Asia-Pacific (PCGIAP). This was achieved by convening joint technical sessions and meetings in Sydney on significant issues such as the development and current status of Asia Pacific Reference Frame (APREF) and the Global Geodetic Observing System (GGOS).

The incoming chair Mikael Lilje attended meeting of the *International Committee on Global Navigation Satellite Systems (ICG)* in Turin, Italy 18–22 October 2010 as Commission representative on Task Force D1 on Geodetic References.

Mikael Lilje attended the *IGS Workshop and Vertical Rates Symposium* in Newcastle Tyne, United Kingdom 28 June – 2 July 2010. This workshop focused on the application and status of current IGS operations and possibilities for future improvements.

Commissions 5 and 6 cosponsored and were represented at the workshop on “*Innovative Technologies for an Efficient Geospatial Management of Earth Resources*” in Ust-Kamenogorsk, Eastern Kazakhstan, 3–7 September 2010.

**David Martin** attended the 12<sup>th</sup> *International Workshop on Accelerator Alignment (IWAA)* held at the Deutsches Elektronen-Synchrotron (DESY) 13–17 September 2010.

The 16<sup>th</sup> *Permanent Committee on GIS Infrastructure for Asia and the Pacific (PCGIAP) Meeting*, held in Singapore, 18–21 October 2010 was attended by Reference Frame WG



**Commission Chairs 2007–2010 and Chairs Elect 2011–2014 in a group picture.**

member **Graeme Blick**. At this event numerous discussions, presentations, and reports were delivered by working group members on topics such as geodesy technologies and applications; geospatial data management and service; spatially enabled government and society; and institutional strengthening.

David Martin also attended the “*Large Volume Metrology Conference*” held in Chester UK, 2–3 November 2010. This forum provided delegates the opportunity to discuss and actually see the latest innovations and instruments in the field of portable 3D industrial measurement technologies.

The 2<sup>nd</sup> *Asia Oceania Regional Workshop on GNSS – “Asia Oceania is the Showcase of New GNSS”* in Melbourne Australia, 21–22 November 2010 was attended by Vice President **Matt Higgins** and Commission 5 Vice Chair **Rob Sarib**.

Volker Schwieger attended the *First International Conference on Indoor Positioning and Indoor Navigation (IPIN)* 15–17 September, Zürich, Switzerland.

Mikael Lilje attended at the *INTERGEO 2010* in Cologne, Germany, 7–9 October 2010 the first INTERGEO academy covering the topic “*GNSS 2010 – Surveying and Navigation in the 21<sup>st</sup> century*”. He also presented on SWEPOS CORS network and its activities in Sweden.

### **Commission 6 – Engineering Surveys**

Commission 6 prepared for the *FIG Congress 2010* in Sydney 16 technical sessions devoted to the engineering survey topics – deformation using GNSS, terrestrial scanning, subsidence and landslides, quality management and standards, LiDAR and InSAR applications, remote sensing and data processing, machine guidance and integrated systems, building measurement and modelling, engineering survey. The commis-

sion annual meeting build space for presentation of the progress made by the commission WGs and study groups.

Commission 6 has been active both at the FIG conferences and in organising commission workshops. Parallel to the traditionally organised series of conferences, last two years started conferences oriented to continual deformation measurement, including integrated sensor system development and usage, to navigation of construction and agricultural machines.

The newest activity is dated to September 2010 and was oriented to indoor navigation. In 2010 Commission 6 was involved in following symposia.

*International Course for Engineering Surveying* is held traditionally in German speaking countries, is well known between the engineering surveying community and is attended by large number of participants. These events are focused through many years to machine-, computer- and robot- vision, to discuss recent scientific and technical advancements and applications for optical static and kinematic 3D measurement techniques. In February 2010 the meeting was held in Munich and the emphasis was at new and emerging technically in precision laser scanning, tunnel construction and the topic fibre optic sensors and their usage in civil engineering structure monitoring.

*International Exhibition and Scientific Congress GEO-SIBERIA* is organised by the Siberian State Geodetic Academy and co-sponsored by Commission 6 is held in Novosibirsk, Russia in April. The congress is organised annually with big interest of Russian surveyors (more than 400 participants), in the field of engineering surveying, information system and surveying technology development.

In 2007 started the series of *International Conference on Machine Control & Guidance*

## Commission Activities



Chair of Commission 7 András Osskó together with incoming Chair Daniel Roberge at the Commission 7 Annual Meeting in Karlovy Vary in September 2010.



Participants of the Commission 7 open symposium in Karlovy Vary in September 2010.



Participants to Commission 8 seminar "Peri-Urban development: The Role of Traditional Authorities and Land Professionals" at the GhIS/FIG/CASLE conference in Accra, Ghana in February 2010. Diane Dumashie, Chair of Commission 8 second from the right.

prepared by Uni Bonn (Germany), with participation of the WG 6.2 and WG 6.5 members, co-sponsored by Commission 5. The latest conference was held in 2010 and was oriented to the newest development and application in the field of machine guidance.

The first *International Conference on Indoor Positioning and Indoor Navigation (IPIN)* was held 2010 in Zurich, Switzerland, with co-operation of Commission 6 and 5, IAG and other professional organisations. The successful conference was attended by 400 participants (250 IT specialists and 150 surveyors) discussed methodology of indoor navigation, possible technology based on WIFI, LAN, terrestrial RF sensors, GSM, etc.

The traditional seminar on *Terrestrial Laser Scanning* in Fulda (Germany) is organised annually by FIG Commission 5 and 6 together with DVW and ISPRS. This seminar serves to show the stage of development of the sensors, processing as well as application, furthermore a view of future developments.

Commission 6 was also represented at the 100 Years ISPRS Centenary Celebrations including ISPRS TC VII Symposium in Vienna, Austria in July 2010.

### Commission 7 – Cadastre and Land Management

Commission 7 main activities have focused around the *FIG Congress 2010* in Sydney and Commission annual meeting as well as to the work of the three working groups.

To the *FIG Congress 2010* in Sydney about 200 papers were offered to Commission 7 sessions. Commission organised 21 own sessions and 14 joint sessions with commission 2, 3, 5, 8 and 9. Commission organised also two Francophone sessions, 6 own and two joint flash sessions.

*Commission 7 Annual Meeting in 2010* was held in Karlovy Vary, Czech Republic, 6–10 September 2010. It included also an *International Open Symposium "Digital Cadastral Map"*. The meetings were organised jointly with the Czech Union of Surveyors and Cartographers. A record participation in the history of commission annual meetings attended: 60 delegates from 32 countries. The Open Symposium attracted 200 professionals from the host and neighbouring countries, and offered three technical sessions with ten presentations. The keynote presentation was given by President **Stig Enemark**.

Working Group 7.1 *Development of Pro Poor Land Management and Land Administration* has focused on the development of the specifications of a first prototype of the Social Tenure Domain Model (STDM). The STDM is intended to introduce new, unconventional approaches in land administration by providing a land administration management framework that would

integrate formal, informal and customary land systems, as well as administrative and spatial components.

The Land Administration Domain Model has been discussed for several years during Commission 7 meetings. The results of these discussions served as a basis for further development of the LADM. The developments of this model have been presented in Commission 7 sessions during the major FIG events since the FIG Congress in Washington D.C., USA in 2002. FIG submitted a proposal to develop an International Standard concerning the LADM to the Technical Committee 211 on Geographic Information of the International Organization for Standardization (ISO/TC211). The proposal received a positive vote from the TC211 member countries and a project team started to work on the development of the standard that is in approval process in 2011 to be the final International Standard in 2012.

Based on the LADM, a model has been developed to accommodate social tenures, termed the Social Tenure Domain Model (STDM). Existing Land Administration systems require extensions to include all existing types of tenures, but the need for this is not always recognized. The STDM allows recording of all types of tenures and enables to show what can be observed on the ground in terms of tenure as agreed within local communities. This agreement counts as evidence from the field.

Chair of Commission 7 **András Osskó** attended the Central Eastern European Regional Consultation of the *FAO Voluntary Guidelines on Responsible Governance of Tenure of Land and other Natural Resources* in Bucharest, Romania, 22–24 March 2010. The meeting was attended by 100 participants from 30 countries including representatives from UN FAO, World Bank, FIG, GTZ and other organizations.

Commission 7 co-organised together with Commission 3 a conference “*Information and Land Management. A Decade after the Millennium*” in Sofia, Bulgaria, 15–17 November 2010. Almost 60 professionals participated in the meeting from 17 countries. In total 41 presentations held. Commission Chair Osskó, Vice Chair **Gyula Iván**, and other 5 delegates represented Commission 7 with four papers.

Chair András Osskó attended the *International Seminar on “Victims of Dispossession Initiatives to Settle the Debt”* in Bogotá, Colombia 24–26 November 2010.

Commission has been involved in following publications in 2010: “*The Social Tenure Domain Model: a pro-poor land tool*” (FIG publication Nr. 52) and “*Free and Libre Open Source Software, FLOSS, in Cadastre and Land Registration: Opportunities and Risks*” (FAO-FIG publication)

## Commission 8 – Spatial Planning and Development

Commission 8 activities have focused on the FIG Congress in Sydney and organising a special symposium on Small Island Developing States (SIDS) as part of the congress. The other key area has been involvement to the FIG Africa Task Force that is chaired by **Diane Dumashie**, Chair of Commission 8.

The SIDS symposium in Sydney was attended by representatives from 23 Pacific islands, Tobago, Trinidad as well as Zanzibar to discuss capacity building for land professionals on SIDS. The meeting sponsored by AusAid, FAO, NZAid, and the Commonwealth Secretariat was a productive meeting resulting in action steps outlined in FIG Publication No.53: “*Sydney Agenda for Action, Small Island Developing States and the Millennium Development Goals: Building the Capacity*”.

Commission 8 organised jointly with GhIS and CASLE the *Accra Conference of the Ghana Institution of Surveyors* in Accra, Ghana, 24–26 February 2010. The conference attracted about 1,000 surveyors mainly from Ghana but many from Nigeria. The theme of conference was “*The Surveyor: Partner in National Development*” that was very well reflected through the conference. The Opening session was attended by the Honorable Minister of Land and Natural Resources and the Honorable Minister of Transport. Welcome addresses were given by **Mr. K. H. Osei-Asante**, President of Ghana Institution of Surveyors; **Mr. Joseph Segun Ajenlekoko**, Regional President of CASLE, and President **Stig Enemark**.

The program included a range of themes covering most aspects of surveying activities in Ghana. A key feature was the almost full day seminar organised by Dr. Diane Dumashie (Chair of FIG Commission 8) focusing on “*Peri-Urban development: The Role of Traditional Authorities and Land Professionals*”. The seminar was opened by a keynote presented by President Enemark entitled “*Surveying: Supporting the Global Agenda and Serving Society*”. This seminar also contributed to the up and coming Africa Task Force theme Planning for Infrastructure focused on partnership with Traditional Leaders.

Further presentations were given by **Wafula Nabutola** (Chair-elect of FIG Commission 8) on “*An East African lens, Traditional leadership in Kenya: The land cycle – outskirts/rural to peri-urban to informal settlements*”; and a special keynote by traditional leader **Awula Annor Adjaye** focusing on Traditional Authority Leadership and introduced by **Kwame Tenadu**, Ghana delegate to FIG Commission 8. These presentations were followed by a very lively discussion

guided by Dr. Diane Dumashie on focusing on the role of land professionals; the tools and methodologies land professionals need, and how to bring together key actors.

In January 2010 Commission Chair Dumashie and Kwame Tenadu attended the FAO Consultation Meeting for the private sector on the draft voluntary guidelines for the responsible governance of land and natural resources.

## Commission 9 – Valuation and the Management of Real Estate

In 2010 Commission 9's activities concentrated on the FIG Congress in Sydney. Commission 9 had its annual meeting and the active Working Groups held their planning sessions. In addition, several presentations on the commission topics were presented in eight technical sessions. Participation in technical sessions and sessions was very active.

WG 9.1 *Compulsory Purchase and Compensations in Land Acquisition and Takings* continued its work with the recommendations on Compulsory Purchase and Compensations. The recommendations were published as the FIG Publication No. 54 “*Compulsory Purchase and Compensation – Recommendations for Good Practice*”.

In addition, the guidelines for land acquisition in developing countries based on presentations in Hanoi Conference 2009 was launched in Sydney as a FIG Publication No. 51 “*Hanoi Declaration: Land Acquisition in Emerging Economies*”.

## Commission 10 – Construction Economics and Management

Commission 10 organised three sessions at the FIG Congress in Sydney that was the main activity of Commission in 2010.



As many commissions Commission 10 main activities focused at the FIG Congress in Sydney.

## Co-operation with United Nations



**Clarissa Augustinus, Chief of UN-HABITAT Land Tenure and Property Administration Section; Stig Enemark, FIG President; and Paul Munro Favre, Chief of the FAO Land Tenure and Management Unit, at the RICS Headquarters, London at the FAO private sector consultation meeting in January 2010.**



**Representatives of the UN-Habitat Professional Forum at the 5<sup>th</sup> World Urban Forum.**



**President Stig Enemark and Vice-President Matt Higgins at the World Bank Annual Conference on Land Policy and Administration in Washington DC in April 2010.**

President **Stig Enemark** attended the 5<sup>th</sup> World Urban Forum in Rio de Janeiro, Brazil 22–26 March 2010 and the meeting of the International Advisory Board of the Global Land Tool Network. The Fifth World Urban Forum (WUF5) organised by UN-HABITAT took place in Rio de Janeiro, Brazil, 22–26 March 2010. The theme of this WUF5 was “*The Right to the City – Bridging the Urban Divide*”. The main topics of WUF5 included how to tackle rapid urbanisation and its impact on the poor. More than 20,000 participants from non-governmental organisations, community-based groups, urban professionals, academics, government, local authorities, and national and international associations attended at the forum. Through a series of round-table discussions, dialogues, and networking events participants discussed formal and informal ways of action-oriented proposals on how to bridge the urban divide. “*Today’s urban divide is largely an outcome of the biases and inadequacies of*

*the three main tiers of government – central local and municipal*” said Dr. **Anna Tibaijuka**, Executive Director of UN-HABITAT in her opening speech.

FIG was represented at the Forum by President Enemark who attended and gave presentations in a number of sessions out of the overwhelming program. Among these the Habitats Professionals Roundtable: “*What Role for the Urban Professionals in the World Urban Campaign*”. The objective was to discuss what professionals can do to help UN-HABITAT in its sustainable urbanization mission. The more specific mission was to present the HPF’s Charter and to discuss how this can be effectively applied in practice and GLTN Roundtable: “*Piloting of a GLTN Land Tool: A Practical Way to Ensure Gender Equity*”

Following the WUF5 President **Enemark** attended the meeting of the GLTN International Advisory Board. The IAB is established to provide objective advice on issues related to the GLTN policies, operational strategies and projects. The key issues of the IAB meeting included a comprehensive review of the GLTN 2009 Annual Progress. The overall assessment reveals that GLTN has been very successful in achieving their goals and the GLTN partners are very committed in their support.

President **Stig Enemark** and Vice-President **Matt Higgins** attended the *World Bank Annual Conference on Land Policy and Administration* in Washington DC, USA 26–27 April 2010. The conference was a follow up to the conference in March 2009 organised jointly between the World Bank and FIG. The background of the conference relates to the challenges posed by recent global developments, especially urbanization, increased and more volatile food prices, and climate change. These challenges have raised the profile of land and the need for countries to have appropriate land policies. There is a need for the World Bank and their partners, such as FIG, to act in a collaborative and coordinated fashion for taking the land governance agenda forward. The conference aimed to increase awareness of the successful implementation of innovative approaches which can help to not only improve land governance, but also contribute to the well-being of the poorest and the achievement of the MDGs. The conference was organised around three themes where the theme on Land Governance included presentations from President Stig Enemark on “*From Cadastre to Land Governance: The Role of Land Professionals and FIG*”; Vice President Matt Higgins on: “*Global positioning infrastructures and their relevance to building sustainable land administration systems*”; and Chair Elect of FIG Commission 7 **Daniel Roberge** on: “*Recon-*



**Expert Group Meeting on Transparency in Land Administration: A Human Capacity Building Agenda for South and South East Asia in Indonesia 19–22 July 2010.**

struction in Haiti: A land rights infrastructure to support its sustainable development". The conference was attended by 300 invited experts from throughout the world. It included about 25 sessions with around 100 presentations.

President **Enemark** attended the *Second Preparatory Meeting of the Proposed United Nations Committee of Experts on Global Geographic Information Management* held in New York, 10–11 May 2010. The meeting was organised by United Nations Statistics Division Experts from 16 countries and 15 regional and international organizations attended the meeting. The purpose of GGIM is to establish a global mechanism for discussion and coordination of critical issues in the field of geographic information management at the first global forum in Seoul, Korea in 2011.

Vice President **CheeHai Teo** attended the *Expert Group Meeting on Transparency in Land Administration: A Human Capacity Building Agenda for South and South East Asia* in Yogyakarta, Indonesia, 19–22 July 2010. Transparency in land administration is the foremost training program that the GLTN has been implementing in cooperation with the Training and Capacity Building Branch of UN-HABITAT and ITC. UN-HABITAT has launched a training of trainers' program in the Asia Pacific Region, South and South East Asia in particular, using the Training Toolkit and Trainers' Guide that was developed earlier for Sub Saharan Africa. The Human Capacity Building Agenda for South and South East Asia on Transparency in Land Administration was kicked off with an Expert Group Meeting to identify these sub-regions' specific land sector governance challenges and priorities. The meeting included presentations by resource persons aimed at contextualizing and embedding training in broad land governance concepts and principles. During the opening of the EGM, Vice President Teo made a presentation



**The closing session at the World Bank annual conference in April provided an excellent overview of the challenges ahead. The session was chaired by Ms. Inga Klevby, Deputy Executive Director UN-HABITAT (third from the right). The conference organiser Dr. Klaus Deininger from the World Bank is at the far right.**



**Keith Bell, Stig Enemark and CheeHai Teo at the World Bank in September 2010.**

titled "Opportunities to Enhance Land Governance in South and South East Asia", and participated and contributed at each of the breakout sessions and discussion time.

President **Stig Enemark** and Incoming President **CheeHai Teo** visited the World Bank

13 September 2010 to strengthen the partnership between FIG and the Land Group of the World Bank. The key purpose of the visit was to review and renew the current Memorandum of Understanding that was signed in February 2007. The visit was hosted by **Keith Bell** and

## Co-operation with United Nations



**President Stig Enemark, Jürgen Vögele, Director of Agriculture and Rural Development Department; and Chee Hai Teo, incoming FIG President at the World Bank in September 2010.**



**The IAB meeting of GLTN in Nairobi in October 2010 was chaired by President Enemark (center). Next to the left is Clarissa Augustinus, Chief UN-HABITAT Land, Tenure and Property Administration Section.**

organised as a meeting with lunch bags. Both President Enemark and Vice President Teo gave a presentation of the importance of the FIG-WB partnership and the achievements over the last four years. The presentation included a list of suggested issues for further cooperation over the coming four year term. The key issues for future cooperation were identified as: The STDM model in cooperation with GLTN and ITC; Land Governance addressing the new challenges; and a joint publication looking at demands for survey accuracy to be “fit for purpose”. The visit included a meeting with the **Jürgen Vögele**, Director of Agriculture and Rural development Department. This meeting confirmed the common interest of FIG and the World Bank in terms of contributing to the global agenda both in relation to the achieving the Millennium Development Goals but also in addressing the new challenges

such as climate change, disaster management and food shortage from the point of secure tenure and good land governance. The big issue of “*land grabbing*” was discussed with reference to recent WB report on Rising Global Interest in Farmland. Finally FIG representatives met with **Jolyne Sanjak**, Managing Director of Department of Compact Implementation, Millennium Challenge Cooperation (MCC).

Vice President **Matt Higgins** attended the 5<sup>th</sup> Meeting of the *International Committee on Global Navigation Satellite Systems (ICG-5)* in Turin, Italy, 18–22 October 2010. The ICG has been formed as a result of recommendations of the UN Committee on the Peaceful Use of Outer Space (COPUOS) The United Nations Office for Outer Space Affairs (UN OOSA) acts as the secretariat for the ICG. FIG has an MoU with UN OOSA. FIG is an associate member of the

ICG and is co-chair of Working Group D. **Mikael Lilje**, Chair Elect of Commission 5 attended the meeting as FIG’s representative on Task Force D1 on Geodetic References.

During the GSDI-12 World Conference in Singapore, 19–22 October 2010 President **Enemark** attended the 16<sup>th</sup> PCGIAP Meeting (Permanent Committee on GIS Infrastructure for Asia & the Pacific) with delegates from the mapping and land administration agencies in the region. The meeting included presentations of progress reports from the three PCGIAP working groups, and also presentations from the liaison organisations including FIG. In Singapore President Enemark also attended a meeting on the *United Nations Initiative on Global Geospatial Information Management (GGIM)* leading to adoption of a mission statement for a new UN organization on Geospatial Information Management.

President **Enemark** attended the *Meeting of the Global Land Tool Network (GLTN) International Advisory Board (IAB)* held 29 October 2010 at the UN-HABITAT Headquarters in Nairobi, and followed by discussions 30 October on future co-operation and partnership between GLTN and FIG. The key issue of the IAB meeting included a comprehensive evaluation of the overall GLTN activities and achievements for the period January-August 2010 The presentation and discussions revealed that GLTN has been very successful in achieving their goals and also that the GLTN partners are very committed in their support. A range of pro-poor land tools has been developed that are now being tested at country level and at scale. The Social Tenure Domain Model has a high priority at the GLTN agenda. This work is undertaken in cooperation between GLTN, FIG, ITC and the World Bank, and with **Christiaan Lemmen** (Chair of FIG WG 7.1) as a key driver. The STDM is seen as critical for recording a wide range of informal land rights and claims. Without such alternatives to the conventional cadastral systems, pro-poor land policies will remain virtually impossible to implement. The STDM concept and the prototype have received wide support and positive feedback from various stakeholders. Recent publications published by GLTN include a publication on Informal Urban Development in Europe produced in cooperation with FIG and with **Chryssy Potsiou**, Chair of Commission 3, as the key author.

## Co-operation with Professional and Regional Organisations

Vice President **Matt Higgins** attended the 1<sup>st</sup> *Asia Oceania Regional Workshop on GNSS* 25–26 January 2010 in Bangkok, Thailand. He gave an invited keynote at the opening ceremony. The Workshop was convened by a new organisation known as Multi-GNSS Asia with strong support from the Japan, Thailand and the UN International Committee on Global Navigation Satellite Systems (ICG). The purpose of the workshop was to bring together interested parties to discuss the implications of next-generation of Global Navigation Satellite Systems, and was conducted in Thailand because Multi-GNSS issues are particularly relevant in the Asia Oceania region because it will be the area of the earth with the largest combined coverage from the new systems.

President **Stig Enemark** attended the 2<sup>nd</sup> *European Conference on Cadastre* in Bucharest, Romania, 6–7 May 2010. The conference was entitled “*The Cadastral surveyor – Paving the Way to the Future*” and was organised by the European Council of European Geodetic Surveyors (CLGE) in cooperation with the Romanian Association of Private Surveyors, the Romanian Geodetic Union, and the Romanian Agency of Cadastre and Land Registration. President Enemark gave at the opening session, after the opening address from CLGE President **Henning Elmstroem**, a keynote address entitled “*From Cadastre to Land Governance*” showing the evolution of cadastral systems over recent years towards the broader concept of land governance and the role of FIG and global surveying profession in this regard. The conference was well attended by the delegates from the more than 30 CLGE member countries and about 130 local Romanian surveyors. At the conference the “*Code of Conduct of the European Surveyors*” was launched and is very useful document also in a global context. The conference adopted further the Bucharest Declaration stating some key principles of the role of the cadastral surveyors in serving society.

President **Enemark** attended the ISPRS Centenary Celebrations in Vienna, Austria, 4 July 2010. The International Society for Photogrammetry and Remote Sensing was founded in 1910 at the Technical University of Vienna. It was therefore appropriate to celebrate the 100 year anniversary of ISPRS at the place of birth. The celebrations included a Centenary General Assembly with official opening and congratulatory speeches. FIG is working closely with ISPRS, especially within FIG Commission 6 and also within the Joint Board of Geospatial Information Societies (JB-GIS). As part of the celebrations JB GIS launched a new publication “*Geoinformation for Disaster Risk Management*” at the UN Office for Outer Space Affairs (UN-OOSA). The



**Prof. Orhan Altan, President of ISPRS and Prof. Stig Enemark, President of FIG at the ISPRS Centenary Gala Dinner at the Vienna City Hall.**



**CLGE Conference on the European Cadastre was held in Bucharest in May 2010.**

aim of the booklet is to explain to governments, decision makers and disaster professionals the potential uses of geoinformation technologies. The booklet also includes a short presentation of each society including FIG and their approach in this area.

Incoming President **Teo** attended the 14<sup>th</sup> Pacific Association of Quantity Surveyors Congress and Board Meeting in Singapore, 25 July 2010. Vice President Teo was invited to the congress to address and interact with the PAQS Board over the proposed collaboration and MoU between FIG and PAQS. He informed the PAQS Board about the co-operation opportunities between FIG and PAQS. The meeting was attended by PAQS members and representatives from International Cost Engineering Council (ICEC)

and Association of African Quantity Surveyors (AAQS). The proposed MoU was forwarded to the FIG General Assembly for approval in 2011.

The 11<sup>th</sup> *biennial International Congress of the Colegio de Ingenieros Topografos de Costa Rica* (CIT), was held at the international conference center at the Ramada Plaza Herradura, San Jose 17–19 September 2010. The theme for the congress was “*Geomatica: Geodesia, Topografia y Catastro en Tiempo Real*” (Geomatics: Current Trends in Geodesy, Topography and Cadastre) reflecting the current challenges and opportunities encountered by the profession not only in Costa Rica but also the region. Some 400 plus delegates attended the three-day congress. President **Enemark** and **Pedro Caverro**, the FIG Ambassador to Latin America represented

## Co-operation with Professional and Regional Organisations



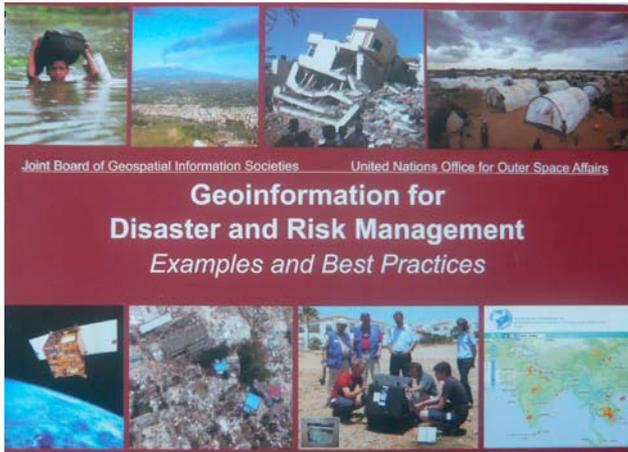
**Ing. Mainor Guadamuz Chavarria, the President of CIT, surrounded by his core team when finalising the new Asociación Panamericana de Profesionales en Agrimensura (APPA) (Panamerican Association of Surveying Professionals) in San Jose in September 2010.**



**Presenters and panel members of Session 4.1 on SDI for Cities at GSDI-12 in Singapore: Victor Khoo, Singapore Land Authority; President Enemark, President Abbas Rajabifard, GSDI; Yerach Doytsher, Vice Chair, Commission 3; Hartmut Müller and Paul Kelly, Commission 3 Working Group chairs.**

FIG at the congress where also the Incoming President **CheeHai Teo** attended. President Enemark in his opening address congratulated the CIT on their professional development and observed progress and achievements by the local profession since FIG Regional Conference in San Jose in 2007. In his keynote presentation, President Enemark spoke of “*Cadastral and Land Management – A Global Approach*”. On the side-line of the congress were the numerous meetings that eventually led to the formation of the Asociación Panamericana de Profesionales en Agrimensura (APPA) (Panamerican Association of Surveying Professionals). The formation of APPA was indeed a highlight of the professional activities within CIT’s 11<sup>th</sup> Congress and also represented the culmination of efforts by FIG over about ten years to mobilise the profession within Latin America.

President **Enemark** attended the GSDI-12 World Conference entitled “*Realising Spatially Enabled Societies*” in Singapore, 19–22 October 2010. FIG and GSDI (Global Spatial Data Infrastructure Association) signed a Memorandum of Understanding at the FIG Congress in Sydney outlining a framework for co-operation. The GSDI-12 World Conference was attended by about 600 participants from 65 countries throughout the world. It included a range of workshops, 5 plenary sessions and 35 technical sessions with about 150 presentations. An inspiring keynote presentation “*A Personal Vision for Spatially Enabling Society*” was given by **Jack Dangermond**, Founding President of ESRI who was also awarded the GSDI Global Citizen Award. The second plenary session included a presentation of President Enemark on “*Spatially Enabled Land Administration: Addressing Societal Needs and Responding to the Global Agenda*”. The conference included three Joint FIG/GSDI sessions with **Paul Kelly**, **Hartmut Müller** and **Yerach Doytsher** as FIG representatives. Furthermore President Enemark chaired a joint FIG/GSDI session on GSDI in land administration and presented a paper on “*Land Administration Challenges in Bhutan: The need for a National cadastral resurvey*”. Finally Prof. Doytsher chaired a joint FIG/GSDI session on SDI in Land Administration. Furthermore President Enemark attended a meeting of the *Joint Board of Geospatial Information Societies (JB-GIS)* that was held during GSDI-12.



**A booklet on Geoinformation for Disaster and Risk management produced by the Joint Board of Geospatial Information Societies (JB GIS) and launched in Vienna in July 2010.**



**Chairman of the Pacific Association of Quantity Surveyors (PAQS), Mr. WeiSin Teoh (right) and incoming President CheeHai Teo during the 14<sup>th</sup> PAQS Board Meeting in Singapore in July 2010.**

## FIG Definition of the Functions of the Surveyor

The definition of the functions of the surveyor as adopted by the FIG General Assembly in 2004:

### Summary

A surveyor is a professional person with the academic qualifications and technical expertise to conduct one, or more, of the following activities;

- to determine, measure and represent land, three-dimensional objects, point-fields and trajectories;
- to assemble and interpret land and geographically related information,
- to use that information for the planning and efficient administration of the land, the sea and any structures thereon; and,
- to conduct research into the above practices and to develop them.

### Detailed Functions

The surveyor's professional tasks may involve one or more of the following activities which may occur either on, above or below the surface of the land or the sea and may be carried out in association with other professionals.

1. The determination of the size and shape of the earth and the measurement of all data needed to define the size, position, shape and contour of any part of the earth and monitoring any change therein.
2. The positioning of objects in space and time as well as the positioning and monitoring of physical features, structures and engineering works on, above or below the surface of the earth.
3. The development, testing and calibration of sensors, instruments and systems for the above-mentioned purposes and for other surveying purposes.
4. The acquisition and use of spatial information from close range, aerial and satellite imagery and the automation of these processes.
5. The determination of the position of the boundaries of public or private land, including national and international boundaries, and the registration of those lands with the appropriate authorities.
6. The design, establishment and administration of geographic information systems (GIS) and the collection, storage, analysis, management, display and dissemination of data.
7. The analysis, interpretation and integration of spatial objects and phenomena in GIS, including the visualisation and communication of such data in maps, models and mobile digital devices.
8. The study of the natural and social environment, the measurement of land and marine resources and the use of such data in the planning of development in urban, rural and regional areas.
9. The planning, development and redevelopment of property, whether urban or rural and whether land or buildings.
10. The assessment of value and the management of property, whether urban or rural and whether land or buildings.
11. The planning, measurement and management of construction works, including the estimation of costs.

In the application of the foregoing activities surveyors take into account the relevant legal, economic, environmental and social aspects affecting each project.

## Visits to Members



Meeting with the traditional leaders of the Accra Region was a highlight during the GhIS/CASLE/FIG Conference.



Mr. Batsukh, Chief of ALACGaC and Stig Enemark, FIG President at the dinner function in a traditional Mongolian Ger (movable living tent) in May 2010.



Mr. Sangay Khandu, Honorary Secretary of the National Land Commission, and President Enemark in Bhutan in June 2010.

FIG President **Stig Enemark** attended the *Accra Conference of the Ghana Institution of Surveyors* organised jointly with CASLE and FIG Commission 8, in Accra, Ghana, 24–26 February 2010. The conference attracted about 1,000 surveyors mainly from Ghana but many from Nigeria. The theme of conference was “*The Surveyor: Partner in National Development*” that was very well reflected through the conference. The Opening session was attended by the Minister of Land and Natural Resources and the Minister of Transport. Welcome addresses were given by **K. H. Osei-Asante**, GhIS President; **Joseph Segun Ajenlekoko**, CASLE Regional President and President Enemark. A key feature was the almost full day seminar organised by **Diane Dumashie**, Chair, Commission 8, focusing on “*Peri-Urban development: The Role of Traditional Authorities and Land Professionals*”. The seminar was opened by a keynote presented by President Enemark entitled “*Surveying: Supporting the Global Agenda and Serving Society*”. Further presentations included **Wafula Nabutola**, Chair Elect, Commission 8.

In conjunction to the 5<sup>th</sup> World Urban Forum in 22–26 March 2012 President **Enemark** visited the *Brazilian Society of Cartography, Geodesy, Photogrammetry and Remote Sensing (SBC)* to discuss with the Council and President **Paulo Cesar Trino**, about the future involvement of SBC in FIG and the possibility of hosting a future FIG event and thereby strengthening the surveying profession in the Latin American region. A following lunch meeting further confirmed the good relations between SBC and FIG.

In connection with a consultancy on the Property Rights Project of the Millennium Challenge Account-Mongolia, President **Enemark** met 26 May 2010 with Mr. **Batsukh**, Chief of

the Mongolian Agency for Administration of Land Affairs, Construction, Geodesy and Cartography (ALACGaC) being affiliate member of FIG. Discussions were around the ongoing development in Mongolia towards a market economy based on clearly identified private land rights. President Enemark also met with the staff of ALACGaC and highlighted the core role of efficient and effective cadastre systems in supporting the privatization process and building a modern society.

Vice President Prof. **Dalal S. Alnaggar** represented the FIG President at the 40<sup>th</sup> Congress of *Ordre des Géomètres-Experts (OGE) l'Agenda 21 des géomètres-experts* 23–25 June in Marseille, France. She attended the congress for four days including meetings of the Fédération des Géomètres Francophones (FGF) and the Mediterranean Union of Surveyors (UMG). The 40<sup>th</sup> OGE Congress with 700 registered participants from 30 countries was a big success. The congress focused in three main topics: sustainable management of companies; sustainable management of territory and planning; and sustainable management of land. Mr. **Benoist Apparu**, Secretary of State, Housing and Urban Planning, gave a keynote presentation. The opening address was made by OGE President **Pierre Bibollet**. The congress concentrated on two main topics: “*How to manage the business of a company in a sustainable way*” and “*How to implement the environmental responsible within a company*”. At the gala dinner organised at Parc Chanut Prof. Alnaggar gave the speech on behalf of the FIG President. At the exhibition 54 surveying companies exhibited their products. At his summary President Bibollet stated that “*implementation of Agenda 21 of the surveying profession has been considered a true strategic action plan for the surveying profession and OGE is the first professional body to develop a professional Agenda 21 in France.*” The day before the congress a meeting of the Fédération des Géomètres Francophones FGF was held. Also a meeting to initiate the Mediterranean Union of Surveyors (UMG) was arranged. Five Mediterranean countries attended this launching meeting of UMG:

Related to a consultancy on the national Cadastral Resurvey Project in Bhutan, President **Enemark** met with Mr. **Sangay Khandu**, Honorary secretary of the Bhutan National Land Commission in Thimphu 30 June 2010. Discussions were around the ongoing cadastral resurvey project and the development of a national land policy. Bhutan is currently establishing the cadastral and legislative basis towards a modern democratic and market based society.

Vice President **CheeHai Teo** attended *Seminar on Land Surveying Basis for Development in Brunei Darussalam* in Gadong, Bandar

Seri Begawan in Brunei Darussalam 2 August 2010. The Survey Department and the Brunei Institute of Geomatics, invited Vice President Teo to the Seminar “*Land Surveying Basis for Development*” and to make a keynote presentation during the official opening session. The seminar was the ninth in the series of seminars organised by the Survey Department. It is a one day seminar highlighting not just the latest developments in land surveying practices and technologies but also the significant role and contribution of surveyors towards development. The opening session was presided by the Minister of Development himself. Also present was the Surveyor General of Brunei Darussalam, **Tuan Hj Jamil Mohd Ali**, who was the host. In the audience there were observers from the ASEAN Federation of Land Surveying and Geomatics (ASEAN FLAG) from Indonesia, Malaysia, Philippines, Singapore and Vietnam. In the keynote presentation entitled “*Geomatics Innovation for National Development: Making the Difference*” the Vice President took the opportunity to address the audience of FIG and what are the current priorities. He touched on geotechnology and geospatial sciences and provided a couple of illustration how innovative applications are making a difference in these challenging times.

Vice President **Teo** attended “*Smart Korea 2010*” Korea NSDI Expo in Seoul 1–3 September 2010. Smart Korea 2010 was the third successive annual Korean NSDI Expo that also incorporates a series of themed symposiums, is the national specialized geospatial symposium and exhibition. This year, the organisers’ aim was the promotion of the convergence of geospatial science and smart technologies that should bring about a better future. Vice President Teo represented FIG at the Expo and made a keynote presentation at the official opening ceremony of the event. In his presentation he stated that geospatial sciences and technologies no longer confine itself to measurement or to just surveying alone. The science and the technologies are pervasive, and considerable advances are occurring in places making a real difference in informed, reliable and responsible decisions. The ongoing financial and economic crisis brings into sharp focus the manner nations, societies, families and individuals to deploy their wealth and allocate their finite resources.

President **Enemark** attended the *Farewell Symposium* for **Paul van der Molen** 2 September 2010 in Appeldoorn. He retired after a long standing carrier at the Dutch Kadaster and ITC. He has contributed to FIG chair of FIG Commission 7, Director of OICRF and FIG Vice-President 2007–2008. The Symposium was very well attended by about 100 key professionals from



**President Enemark visited the Brazilian Society of Cartography, Geodesy, Photogrammetry and Remote Sensing (SBC) to discuss with the Council and President Paulo Cesar Trino.**



**President Enemark attended the Farewell Symposium for Paul van der Molen 2 September 2010 in Appeldoorn.**



**Henning Elmstroem, President of DdL, Karl-Friedrich Thöne, President of DVW and Stig Enemark, FIG President.**

the Netherlands and abroad around the theme of “*Cadastrés of the Future*” that has been Paul’s core professional focus throughout his career. Key speakers included President Enemark, **András Osskó**, Chair of FIG Commission 7 and **Christiaan Lemmen**, Vice-Chair of Commission 7. In his keynote presentation President Enemark outlined the major change of the FIG focus over recent years: “*From Cadastre to Land Governance*”. FIG intend to play a strong role in building the capacity to design, build and manage Land Governance systems in response to Climate Change and in support of the Millennium Development Goals.

During their visit to the World Bank in September 2010 President **Stig Enemark** and Incoming President **CheeHai Teo** had a *dinner meeting* in Washington with **Curt Summers**, Secretary General of the *American Congress of Surveying and Mapping*. Common issues were discussed and especially the financial constraints that ACSM is currently facing.

The world biggest tradeshow in surveying and geomatics business *INTERGEO 2010* gathered 17,500 visitors Cologne, Germany 5–7 October. Already 25 per cent of exhibition visitors come outside Germany and their portion is further increasing. The number of exhibitors exceed 500 companies representing 32 nations. The *INTERGEO* conference titled “*Knowledge and Action for Planet Earth*” attracted 1,500 participants. The third day plenary session was dedicated to international trends in surveying and land managements. President **Stig Enemark** gave a presentation “*Surveying: Where are we heading ?*” focussing on the chancing role of land professionals and on the land management vision. He also described the work that FIG has made in implementing the UN Millennium Development Goals and addressed the achievements that FIG has reached over the last four years. FIG was represented at the *INTERGEO* by President Enemark, incoming Vice President **Rudolf Staiger** and **Peter Normann Hansen**, Ambassador for corporate members and **John Hohol**, President of the FIG Foundation.

The seminar “*Assessment of Training Opportunities and Needs for Surveyor and their Technicians in West Africa*” was organised by the *Fédération des Géomètres Francophones (FGF)* in Niamey, Niger, 14–15 October 2010. The successful event hosted by the *Association des Géomètres Experts du Niger* gathered about 80 participants from 13 countries from Sub-Saharan Africa. For each country, a current state of the training opportunities for a surveyor has been assessed, as well as their specific needs. The seminar was chaired by **François Mazuyer**, President of the FGF. FIG was repre-



**Opening ceremony of the seminar in Niamey, Niger in October: President François Mazuyer, FGF in the middle and FIG representative Marc Vanderschueren on the right.**



**Opening panel discussion at the 2<sup>nd</sup> International Training Course for Surveyors in Rome in September 2010.**

sented by **Marc Vanderschueren** on request by President **Stig Enemark**.

The *Consiglio Nazionale Geometri* and *Geometri Laureati CNGGL* organised in cooperation with *Geoweb S.p.A.*, Company providing web services for surveyors, organised the *Second International Training Course of Territorial Survey* in Rome, Italy 20 September – 8 October 2010. The course was inaugurated by President **Fausto Savoldi**. CNGGL and President **Piero Panunzi**, *Geoweb*. The opening ceremony included also a presentation from **Chryssy Potsiou**, FIG incoming Vice President and current Chair of Commission 3. She also made another presentation on “*The Need for Spatial Information in Urban Management*”.

## Permanent Institutions and Task Forces

### Permanent Institutions

FIG has two permanent institutions: *The International Office of Cadastre and Land Records – OICRF*, and *The International Institution for the History of Surveying and Measurement – Permanent Institution of FIG (IIHSM)*. The *FIG Foundation* is in addition an independent body within the Federation.

OICRF maintains a digital library that contains approximately 9,550 publications (1<sup>st</sup> of January 2011), which include things such as conference documents, magazine articles and reports on land administration. All of the available documents and the most recent publications can be downloaded and accessed electronically at [www.oicrf.org](http://www.oicrf.org). In 2010 the digital library got more than 21,800 visitors from 145 countries and about 7,350 papers have been downloaded. This number is based on the application of Google Analytics; visits from search engines are excluded in this. OICRF is hosted by the Netherlands Cadastre, Public Registers and Mapping Agency.

At the congress in Sydney FIG General Assembly appointed **Christiaan Lemmen** (The Netherlands) as the new OICRF Director. He succeeded Prof **Paul van der Molen** Who was OICRF Director for more than 15 years. Ms **Pauline van Eiland** succeeded Lemmen as OICRF Secretary.

The International Institution for the History of Surveying and Measurement organised a broad programme for the FIG Congress in Sydney. The IIHSM Workshop was organised by **John Brock** and Director **Jan de Graeve** and **Alan Wright** attended. There were 110 attendees at the first session of papers held in Parramatta Old Government House and 133 attendees the following day at the Mitchell Library. The IIHSM was also lucky in getting all the Surveyors-General of Australia together to discuss their predecessors. In addition there were very successful visits including around Government House; to the site of the Parramatta Observatory and the 1828 Broad Arrow; and Walking Tour of Sydney.

While in Australia de Graeve was invited to discussions about **William Light** who designed the original plan of Adelaide. It has been proposed that this might warrant submission as a possible World Heritage Monument.

The institution is nearing completion of a bibliographic work on **Gerard Mercator** whose 500<sup>th</sup> anniversary will be celebrated during 2011.

**Jim Smith** is continuing to assemble material relating to the Arc of 30<sup>th</sup> Meridian and the European Arc that connects the two to the Struve Arc World Heritage Monument.

The FIG publication *History of Surveying*. (Publication No. 50) records the activities of the IIHSM, its aims, objects and activities in the past, present and future was launched in Sydney.



**Participants of the Africa Task Force workshop in Mombasa, Kenya in November 2010.**

### Task Forces

At the end of 2010 FIG has two Task Forces: FIG Africa Task Force and Task Force for Spatially Enabled Society.

The FIG Africa Task Force organised its first two-day workshop on *Peri-Urban Settlements: Tools & Techniques for Surveyors to ensure Environmental and Social Resilience* in Mombasa, Kenya, 11–12 November 2010. The Task Force was established by the General Assembly in 2009 for period 2010–2014. It is a new initiative aimed at supporting FIG member associations and academic members in Africa. The key purpose of the Task Force is to enable the surveying profession in Sub Saharan Africa to deal with social responsibility in terms of contributing to achieving the Millennium Development Goals. In this regard, the role of the surveyors as change agents engaging with the politicians is important. Each year the Task force will invite an African member association to co-host a workshop. The first workshop was held in Mombasa and it was hosted in co-operation with the Institution of Surveyors Kenya (ISK).

The workshop was targeted at senior and middle level land professionals in the private and public sector and educational and land professional institutes. It brought together decision makers and practitioners from several African nations (Ghana, Kenya, Nigeria, Tanzania, Rwanda, South Africa and Zambia) with expertise across the range land professional disciplines within the FIG membership. The workshop was by invitation only and number of participants was limited to 60 selected by AFT and ISK in respect of national attendees. President **Stig**

**Enemark** provided the keynote, the MDG overview; Prof. **Saad Yahya** (Kenya) a view of peri-urban Africa, definitions and categories; and **Emmanuel Offei-Akrofi** (Ghana) presented Land for Periurban Infrastructure in Customary Areas, a case study of Ghana.

**Diane Dumashie**, Chair of the FIG Africa Task Force summarized the outcome of the workshop: that the “land professional asks some fundamental questions about the place of land administration and management in modern African society. In what way does good land economics – in this case, lateral thinking about infrastructure routes – produce economic and social value?” The workshop was co-sponsored by the UN-HABITAT Global Land Tool Network.

The *Task Force on Spatially Enabled Society* was established in May 2009 in Eilat. The aim is to focus on the term of “Spatially-Enabled Societies” and the issues linked with it, to come up with a definition, and to support the surveying profession to become aware of the issues in order to provide the appropriate services.

# FIG Foundation and Communication

## The FIG Foundation – Building a Sustainable Future



The FIG Foundation is an independent body under the International Federation of Surveyors.

The Foundation has been established for the purpose of raising funds to finance surveying education development projects

and supporting young surveyors in order to build a sustainable future.

- The Foundation funds shall not be used to support the normal activities of FIG.
- The Foundation is administered by the FIG Office in Copenhagen and directed by a Board of five Directors appointed by the FIG Council.
- The Directors of the Foundation will announce every year the scholarships and grants available. The first grants were given in 2002.

## The FIG Foundation – How can I contribute?

Companies, associations, institutions, events, surveyors' groups and individuals may contribute to the Foundation by:

- Donations which will be recognised by a plaque or a certificate of different categories reflecting the sum of donation as follows:
  - platinum plaque EUR 25,000
  - gold plaque EUR 10,000
  - silver plaque EUR 5,000
  - bronze plaque EUR 1,000.
- Donations to support specific projects or by offering scholarships. Donors and Benefactors may use the FIG Foundation logo to promote their project donations or scholarships.
- Voluntary donation when registering to FIG events.
- Attending social functions such as the FIG Foundation Dinners held during every FIG Congress and Working Week and other events.

## Communication

The main tools for communication of the Federation are the FIG web site [www.fig.net](http://www.fig.net) and different newsletters (both as soft and hard copies) and printed material and publications and CD-ROMs.

The web site includes e.g. the work plan of the Council and the commissions; contact details of Council members, member associations, affiliates, corporate members, academic members, commission officers and commission

delegates; forthcoming events; and FIG publications and conference reports.

The FIG annual review – an overview of major activities and achievements and the main medium of external communication.

This is supported by a monthly e-Newsletter which is sent free of charge to all subscribers. All commissions have also their newsletters that are published 1–2 per year and posted on the commission's web site.

In the FIG publications series the federation publishes formal policy statements and ethical, educational and technical guidelines, these are also available on the FIG home page.

Proceedings of FIG conferences and of selected technical seminars sponsored or cosponsored by FIG's commissions and member associations are available on the FIG home page.

FIG publishes also on the web site a monthly article that is selected from a conference or event and that is of general interest.

## New publications in 2010

In Sydney and at the Handover Ceremony in November 2010 in total 12 new FIG publications were launched and circulated.

- FIG Publication No. 45: Land Governance in Support of The Millennium Development Goals. A New Agenda for Land Professionals. FIG / World Bank Conference, Washington DC, USA 9–10 March 2009. FIG Policy Statement, 2010
- FIG Publication No. 46: Enhancing Surveying Education through e-Learning. A publication of FIG Commission 2 – Professional Education. FIG Report, 2010.
- FIG Publication No. 47: Institutional and Organisational Development – A Guide for Managers. FIG Guide, 2010
- FIG Publication No. 48: Rapid Urbanization and Mega Cities: The Need for Spatial Information Management. Research study by FIG Commission 3. FIG Report 2010
- FIG Publication No. 49: Cost Effective GNSS Positioning Techniques. FIG Commission 5 Publication. FIG Report, 2010.
- FIG Publication No. 50: History of Surveying. FIG Report 2010
- FIG Publication No. 51: Hanoi Declaration: Land Acquisition in Emerging Economies. FIG Policy Statement, 2010
- FIG Publication No. 52: The Social Tenure Domain Model – A Pro-Poor Land Tool. FIG Report, 2010
- FIG Publication No. 53: Sydney Agenda for Action. Small Island Developing States and the Millennium Development Goals: Building the Capacity. FIG Report 2010.
- FIG Publication No. 54: Compulsory Purchase and Compensation – Recommendations for

- Good Practice. FIG Policy Statement, 2010.
- FIG Publication No. 55: Spatial Planning in Coastal Regions. Facing the Impact of Climate Change. FIG Report 2010.
- FIG Publication No. 56: Guidelines for the Planning, Execution and Management of Hydrographic Surveys in Ports and Harbours. FIG Report 2010.

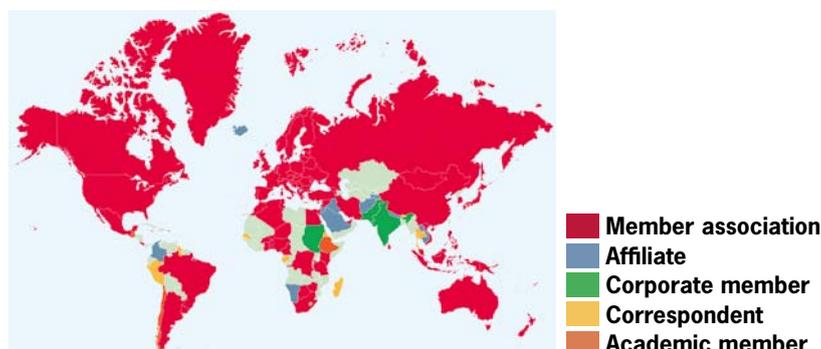
FIG has also published the Sydney Declaration. Declaration from the XXIV FIG Congress, Sydney, Australia, 11–16 April 2010.

In addition FAO Land Tenure Group and FIG Commission 7 WG 7.3 launched publication "FLOSS in Cadastre and Land Registration – Opportunities and Risks" at the FIG Congress in Sydney. Land administration and cadastral systems in the 21<sup>st</sup> century depend on the use of information technology (IT) tools. This publication explores the advantages, and disadvantages of open source solutions within the context of cadastre and land registration. It is the result of four years of cooperation between FAO and FIG WG 7.3.



## FIG Members (December 2010)

Map based on information in May 2011.



### Member associations

<b>Albania</b>	Albania Association of Geodesy
<b>Algeria</b>	Ordre des Géomètres-Experts Fonciers
<b>Argentina</b>	Federación Argentina de Agrimensores
<b>Armenia</b>	Association of Private Surveyors
<b>Australia</b>	Surveying and Spatial Sciences Institute
<b>Austria</b>	Austrian Society for Surveying and Geoinformation
<b>Belarus</b>	Land Reform Association
<b>Belgium</b>	Union Belge des Géomètres-Experts Immobiliers
<b>Benin</b>	Syndicat National des Géomètres-Topographes et Assimilés du Bénin
<b>Bosnia-Herzegovina</b>	Geodetic Association of Herceg-Bosnia
<b>Botswana</b>	Botswana Surveying and Mapping Association
<b>Brazil</b>	Brazilian Society of Cartography, Geodesy, Photogrammetry and Remote Sensing FENEA – Federação Nacional dos Engenheiros Agrimensores
<b>Brunei Darussalam</b>	Brunei Institution of Geomatics
<b>Bulgaria</b>	Union of Surveyors and Land Managers in Bulgaria Chamber of Graduate Surveyors
<b>Burkina Faso</b>	Association des Geometres et Topographes du Burkina
<b>Cameroon</b>	Ordre National des Geometres du Cameroun
<b>Canada</b>	The Canadian Institute of Geomatics
<b>China P.R.</b>	Chinese Society of Geodesy, Photogrammetry and Cartography China Institute of Real Estate Appraisers and Agents CIREA
<b>Congo D.R.</b>	Federation des Ingenieurs Geometres-Topographes
<b>Costa Rica</b>	Colegio de Ingenieros Topógrafos de Costa Rica
<b>Croatia</b>	Croatian Geodetic Society
<b>Cyprus</b>	Association of Rural Surveying Engineers of Cyprus Cyprus Association of Property Valuers
<b>Czech Republic</b>	Czech Union of Surveyors and Cartographers Czech Association of Certified Property Appraisers
<b>Denmark</b>	Den danske Landinspektørforening
<b>Egypt</b>	Egyptian Committee of Surveying and Mapping

<b>Estonia</b>	Association of Estonian Surveyors
<b>Fiji</b>	Fiji Institute of Surveyors
<b>Finland</b>	The Finnish Association of Surveyors Maanmittausalan ammattikorkeakoulu- ja opistoteknisten Liitto MAKLI ry
<b>France</b>	Ordre des Géomètres-Experts Association Française de Topographie
<b>Georgia</b>	Society of Professionals of Land Information Technologies
<b>Germany</b>	DWV – Deutscher Verein für Vermessungswesen – Gesellschaft für Geodäsie, Geoinformation und Landmanagement
<b>Ghana</b>	Ghana Institution of Surveyors
<b>Greece</b>	Technical Chamber of Greece Hellenic Association of Rural and Surveying Engineers
<b>Hong Kong SAR, China</b>	The Hong Kong Institute of Surveyors The Hong Kong Institution of Engineering Surveyors
<b>Hungary</b>	Hungarian Society of Surveying, Mapping and Remote Sensing
<b>Indonesia</b>	Ikatan Surveyor Indonesia
<b>Iran, Islamic Republic</b>	Iranian Society of Surveyors
<b>Ireland</b>	The Society of Chartered Surveyors The Irish Institution of Surveyors
<b>Israel</b>	Association of Licensed Surveyors in Israel
<b>Italy</b>	Consiglio Nazionale Geometri e Geometri Laureati
<b>Jamaica</b>	The Land Surveyors Association of Jamaica
<b>Japan</b>	Japan Federation of Surveyors
<b>Kenya</b>	Institution of Surveyors of Kenya
<b>Korea, Republic of</b>	Korea Confederation of Surveyors
<b>Kosovo</b>	Kosova Surveyors Association
<b>Latvia</b>	Latvian Associations of Surveyors
<b>Lebanon</b>	Ordre des Géomètres-Topographes du Liban
<b>Lithuania</b>	Lithuanian Association of Surveyors Lithuanian Association of Property Valuers
<b>Luxembourg</b>	Ordre Luxembourg des Géomètres
<b>Malaysia</b>	Association of Authorised Land Surveyors Malaysia
<b>Malta</b>	The Malta Institution of Surveyors

## FIG Members (December 2010)

<b>Mongolia</b>	Mongolian Association of Geodesy and Cartography
<b>Morocco</b>	Ordre National des Ingénieurs Géomètres-Topographes
<b>Nepal</b>	Nepal Institution of Chartered Surveyors
<b>Netherlands</b>	Geo-informatie Nederland
<b>New Zealand</b>	New Zealand Institute of Surveyors
<b>Niger</b>	Association des Géomètres Experts du Niger
<b>Nigeria</b>	Nigerian Institution of Surveyors The Nigerian Institute of Quantity Surveyors
<b>Norway</b>	Norges Jordskifte kandidatforening (NJKF), faglig gruppe af Tekna and GeoForum
<b>Palestinian Authority</b>	Licensed Surveyors Association in Palestine
<b>Papua New Guinea</b>	Association of Surveyors of Papua New Guinea
<b>Philippines</b>	Geodetic Engineers of the Philippines, Inc.
<b>Poland</b>	Association of Polish Surveyors
<b>Portugal</b>	Ordem dos Engenheiros, Colégio de Engenharia Geografica
<b>Puerto Rico, USA</b>	Colegio de Ingenieros y Agrimensores de Puerto Rico
<b>Romania</b>	Union of Romanian Geodesy Romanian Association of Private Surveyors
<b>Russia</b>	Federal Service of State Registration, Cadastre and Cartography (Rosreestr)
<b>Serbia</b>	Union of Surveying Engineers of Serbia
<b>Slovak Republic</b>	Slovak Union of Surveyors and Cartographers Chamber of Surveyors and Cartographers
<b>Slovenia</b>	Association of Surveyors of Slovenia
<b>South Africa</b>	South African Council for Professional and Technical Surveyors
<b>Spain</b>	Colegio Oficial de Ingenieros Técnicos en Topografía
<b>Sri Lanka</b>	Surveyors' Institute of Sri Lanka
<b>Sweden</b>	Association for Chartered Surveying, Property Evaluation and Transactions – ASPECT
<b>Switzerland</b>	geosuisse – Swiss society of geomatics and land management
<b>Syria</b>	Order of Syrian Engineers and Architects
<b>Tanzania</b>	Institution of Surveyors of Tanzania
<b>Togo</b>	Ordre des Géomètres du Togo
<b>Trinidad and Tobago</b>	Institute of Surveyors of Trinidad and Tobago
<b>Tunisia</b>	Association Nationale des Ingenieurs Géomètres-Experts Tunisiens
<b>Turkey</b>	Chamber of Surveying Engineers of Turkey
<b>Ukraine</b>	Ukrainian Society of Geodesy and Cartography
<b>United Kingdom</b>	The Royal Institution of Chartered Surveyors RICS Chartered Institution of Civil Engineering Surveyors
<b>Uruguay</b>	Asociacion de Agrimensores del Uruguay
<b>U.S.A.</b>	American Congress on Surveying and Mapping The Appraisal Institute
<b>Vietnam</b>	Association of Geodesy, Cartography and Remote Sensing
<b>Zimbabwe</b>	Survey Institute of Zimbabwe

## Affiliate Members

<b>Afghanistan</b>	Afghan Land Consulting Organization Afghanistan Information Management Services
<b>Australia and New Zealand</b>	ANZLIC – the Spatial Information Council
<b>Belgium</b>	General Administration of the Patrimonial Documentation, Federal Public Service Finance
<b>Brunei Darussalam</b>	Survey Department, Ministry of Development
<b>Cambodia</b>	Ministry of Land Management, Urban Planning and Construction
<b>Chile</b>	Servicio Hidrográfico y Oceanográfico de la Armada de Chile
<b>China P.R.</b>	China Land Surveying and Planning Institute
<b>Colombia</b>	Instituto Geográfico Agustín Codazzi
<b>Croatia</b>	State Geodetic Administration of Republic of Croatia
<b>Denmark</b>	National Survey and Cadastre Denmark
<b>Fiji</b>	Ministry of Lands and Mineral Resources
<b>Finland</b>	National Land Survey of Finland
<b>Hungary</b>	Institute of Geodesy, Cartography and Remote Sensing (FÖMI)
<b>Iceland</b>	The Land Registry of Iceland
<b>Iran</b>	National Cartographic Center
<b>Republic of Iraq</b>	General Directorate for Surveying, Ministry of Water Resources
<b>Israel</b>	Survey of Israel
<b>Italy</b>	Italian Society of Photogrammetry and Topography (SIFET)
<b>Jordan</b>	Department of Lands & Survey, Ministry of Finance
<b>Lao PDR</b>	National Geographic Department
<b>Macedonia (FYROM)</b>	State Authority for Geodetic Works
<b>Mexico</b>	National Institute of Statistics, Geography and Informatics (INEGI)
<b>Moldova</b>	Agency for Land Administration and Cadastre of Republic of Moldova
<b>Mongolia</b>	Administration of Land Affairs, Geodesy & Cartography
<b>Namibia</b>	Office of the Surveyor General, Ministry of Lands, Resettlement and Rehabilitation
<b>Nepal</b>	Survey Department, Government of Nepal
<b>Netherlands</b>	Cadastre, Land Registry and Mapping Agency
<b>Norway</b>	Statens kartverk, Norwegian Mapping and Cadastre Authority
<b>Romania</b>	National Agency for Cadastre and Land Administration
<b>Russian Federation</b>	Siberian State Academy of Geodesy
<b>Rwanda</b>	Ministry of Lands, Resettlement and Environment
<b>Saudi Arabia, Kingdom of</b>	Ministry of Municipal and Rural Affairs
<b>Sri Lanka</b>	Survey Department

<b>Sweden</b>	Lantmäteriet
<b>Switzerland</b>	Swiss Federal Office of Topography, swisstopo
<b>United Arab Emirates</b>	Surveying Department, Dubai
<b>USA</b>	United States Department of Commerce, National Oceanic and Atmospheric Administration NOAA Cadastral Survey Bureau of Land Management

## Academic Members

<b>Australia</b>	The University of Melbourne, Department of Geomatics
	RMIT University, Department of Geospatial Science
	University of New South Wales, School of Surveying and Spatial Information Systems
	University of Southern Queensland, Department of Surveying and Land Information
	University of Technology Sydney, School of Construction Property & Project Management
<b>Austria</b>	University of Agricultural Sciences Vienna, Institute of Surveying, Remote Sensing and Land Information
<b>Bahrain</b>	Arabian Gulf University, College of Graduate Studies
<b>Belgium</b>	ECAM – Haute Ecole Leonard de Vinci, Département Construction
	University of Applied Sciences Kaho Sint-Lieven, Department of Engineering in Construction and Land Surveying
	University of Liege, Unit of Geomatics
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	Université Laval, Department of Geomatics Sciences
	University of New Brunswick, Department of Geodesy and Geomatics Engineering
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	Universidad Distrital Francisco José de Caldas, Facultad del Medio Ambiente y Recursos Naturales
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	Helsinki Metropolia University of Applied Sciences, Land Surveying

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	Technological Educational Institute of Athens, Department of Topography
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<b>Jamaica</b>	University of Technology Jamaica, Division of Surveying and Geographic Information Sciences
<b>Kazakhstan</b>	East Kazakhstan State Technical University
<b>Kenya</b>	University of Nairobi, Department of Surveying
<b>Latvia</b>	Riga Technical University, Department of Geomatics
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	Lithuanian University of Agriculture, Water and Land Management Faculty
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<b>Netherlands</b>	ITC International Institute for Geo-Information Science and Earth Observation
<b>New Zealand</b>	University of Otago, Department of Surveying
<b>Nigeria</b>	University of Lagos, Department of Surveying and Geoinformatics
	Nnandi Azikiwe University, Faculty of Environmental Sciences
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	Bergen University College
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**Members of FIG Council 2007–2010 at the Council meeting during the FIG Congress 2010 in Sydney in April 2010: ACCO Representative Dr. Chryssy Potsiou (Greece, left), Vice President Matt Higgins (Australia). President Prof. Stig Enemark (Denmark), Vice President Dr. Dalal S. Alnaggar (Egypt), Vice President Iain Greenway (United Kingdom) and Vice President Teo CheeHai (Malaysia).**

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## Commission Chairs 2007–2010



**Commission Chairs at FIG Congress in Sydney, Australia in April 2010: Yaacoub Saade (Comm. 1, on the left), Bela Markus (Comm. 2), Chryssy Potsiou (Comm. 3), Andrew Leyzack (Comm. 4), Rudolf Staiger (Comm. 5), Alojz Kopacik (Comm. 6), András Osskó (Comm. 7), Diane Dumashie (Comm. 8), Kauko Viitanen (Comm. 9) and Andrew Morley (Comm. 10).**

### **Commission 1 – Professional Practice**

*Chair: Mr. Yaacoub Saade (Lebanon)*

Perception of surveying profession; professional practice, legal aspects and organisational structures; standards and certification; code of ethics and applications; under-represented groups in surveying; students and young surveyors; information technology management and professional practice; project management, quality and best practice.

### **Commission 2 – Professional Education**

*Chair: Professor Bela Markus (Hungary)*

Curriculum development; learning and teaching methods and technologies; educational management and marketing; continuing professional development; networking in education and training.

### **Commission 3 – Spatial Information Management**

*Chair: Dr. Chryssy Potsiou (Greece)*

Management of spatial information about land, property and marine data; spatial data infrastructure – data collection, analysis, visualisation, standardisation, dissemination, and support of good governance; knowledge management for SIM; business models, public-private-partnerships, professional practice and administration.

### **Commission 4 – Hydrography**

*Chair: Mr. Andrew Leyzack (Canada)*

Hydrographic surveying; hydrographic education, training and CPD; marine environment and coastal zone management; data processing and

management; nautical charting and bathymetric maps – analogue and digital, including electronic navigational charts.

### **Commission 5 – Positioning and Measurement**

*Chair: Professor Rudolf Staiger (Germany)*

The science of measurement including instrumentation, methodology and guidelines; the acquisition of accurate and reliable survey data related to the position, size and shape of natural and artificial features of the earth and its environment and including variation with time.

### **Commission 6 – Engineering Surveys**

*Chair: Professor Alojz Kopacik (Slovakia)*

Acquisition, processing and management of topometric data; quality control and validation for civil engineering constructions and manufacturing of large objects; modern concepts for setting-out and machine guidance; deformation monitoring systems; automatic measuring systems, multi-sensor measuring systems; terrestrial laser systems.

### **Commission 7 – Cadastre and Land Management**

*Chair: Mr. András Osskó (Hungary)*

Cadastre, land administration and land management; development of pro poor land management and land administration; development of sustainable land administration as infrastructure for sustainable development to underpin economic growth; applications of innovative and advanced technology in cadastre and land

administration; promoting the role of surveyors in land administration matters to the public and stakeholders.

### **Commission 8 – Spatial Planning and Development**

*Chair: Dr. Diane Dumashie (United Kingdom)*

Regional and local structure planning; urban and rural land use planning and implementation; planning policies and environmental management for sustainable development; re-engineering of mega cities; public-private partnerships; informal settlement issues in spatial development, planning and governance.

### **Commission 9 – Valuation and the Management of Real Estate**

*Chair: Professor Kauko Viitanen (Finland)*

Valuation; investment in real estate and investment planning; real estate investment vehicles; real estate, development finance and land use feasibility planning; real estate economics and markets and market analyses; management of property and property systems; management of public sector property.

### **Commission 10 – Construction Economics and Management**

*Chair: Mr. Andrew Morley (United Kingdom)*

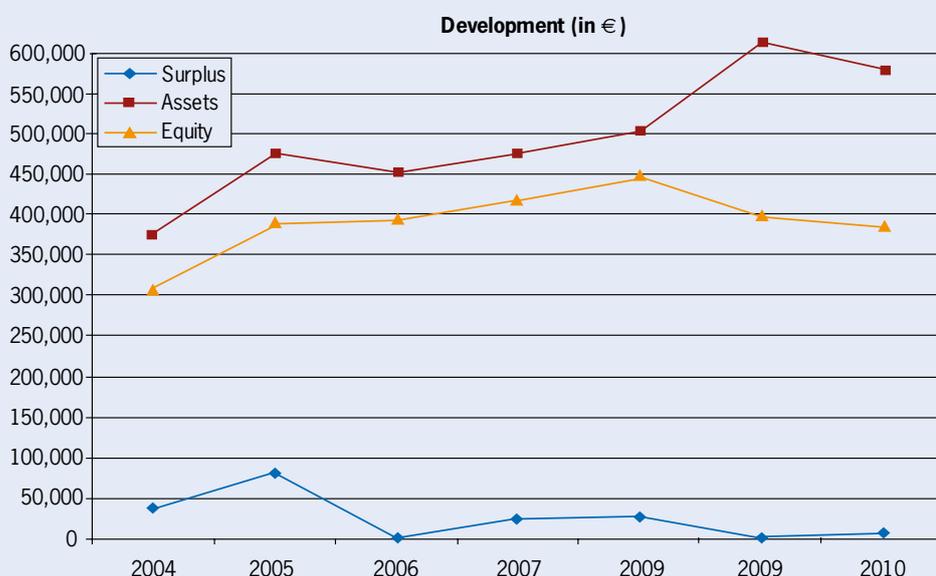
Construction economics, including quantity surveying, building surveying, cost engineering and management, estimating and tendering; commercial management including procurement, risk management and contracts; project and programme management including planning and scheduling.

## Income and Expenditure Account 2008–2010

REGULAR INCOME	Result 2010 <sup>*)</sup> Euro	Budget 2010 Euro	Result 2009 Euro	Result 2008 Euro
<b>Subscriptions</b>				
Member associations	283,051	285,000	285,572	275,757
Affiliates	20,203	18,000	16,361	15,385
Corporate members	88,874	110,000	109,667	108,794
Academic members	18,674	17,860	17,895	17,463
Less bad debts	20,540	15,000	11,794	12,875
	<b>390,262</b>	<b>415,860</b>	<b>417,702</b>	<b>404,524</b>
Financial income	6,259	12,000	4,856	13,422
Less banking costs	205	250	294	0
<b>Total regular income</b>	<b>396,316</b>	<b>427,610</b>	<b>422,273</b>	<b>417,946</b>
<b>REGULAR EXPENDITURE</b>				
Administration	212,134	233,750	241,423	207,882
Marketing and publications	35,642	24,000	11,232	25,169
Council and executive management	208,746	206,000	207,762	184,127
Commission support	35,444	35,000	25,986	31,489
<b>Total regular expenditure</b>	<b>491,966</b>	<b>498,750</b>	<b>486,403</b>	<b>448,667</b>
<b>Surplus/deficit of regular income over regular expenditure</b>	<b>-95,650</b>	<b>-71,140</b>	<b>-64,130</b>	<b>-30,721</b>
<b>PROJECTS</b>				
<b>Events – funds received by FIG</b>	<b>85,599</b>	<b>102,500</b>	<b>41,657</b>	<b>68,366</b>
<b>Other projects</b>	<b>14,096</b>	<b>4,000</b>	<b>22,853</b>	<b>-9,616</b>
<b>RESULT</b>				
<b>Overall surplus/deficit in the year – normal activities</b>	<b>4,045</b>	<b>35,360</b>	<b>380</b>	<b>28,029</b>
<b>Exceptional items</b>	4,325		50,713	
<b>Items funded from reserves</b>	10,483		2,123	
<b>Total reserve at the year end</b>	<b>383,032</b>		<b>394,493</b>	<b>503,453</b>
Specific reserves	–		8,548	11,428
General reserves	383,032		385,945	492,449
General reserve as a % of regular annual expenditure	78%		79%	110%

\*) The accounts have been adopted by the General Assembly 18 May 2011. The income and expenditure presentation follow the template approved by the General Assembly in 2009.

## FIG Balances 2004–2010



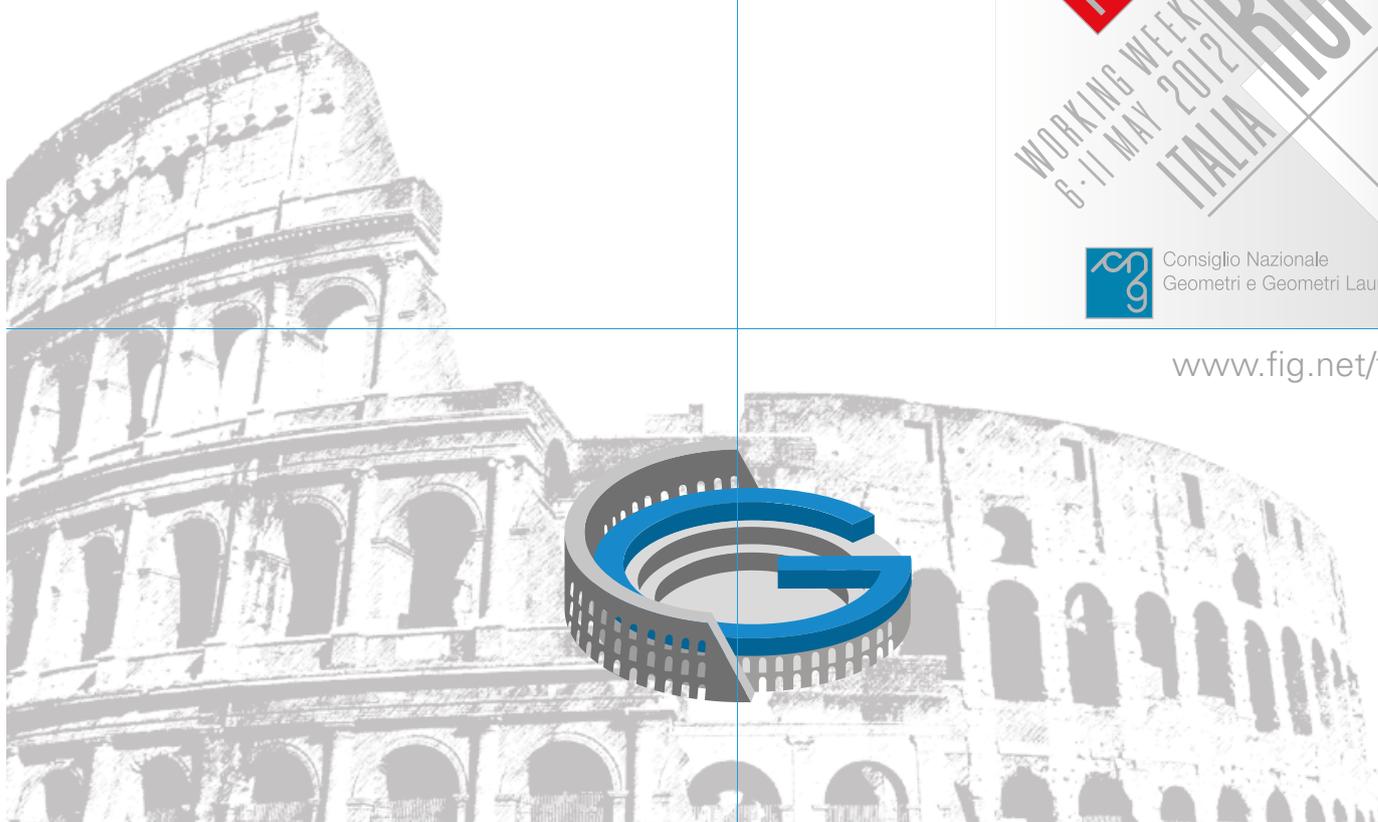
Iain Greenway, Vice President in charge of finances.

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