

Facing the challenges, building the capacity

FIG in Sydney

Dr Gethin Wyn Roberts FCIInstCES, Chair Elect FIG Commission 6: Engineering Surveys (looking distraught at being stranded in Sydney for five days)

THE INTERNATIONAL FEDERATION OF SURVEYORS

(FIG) holds a congress every four years, with working weeks held the three years in between. The 2010 congress was held in Sydney, Australia between 11-16 April and covered topics that are enveloped by all 10 of its commissions. Over 2,200 participants from 100 countries attended the congress, including 120 students. This made the event the biggest gathering of FIG delegates ever.

Grand openings

The opening ceremony, featuring representatives from the Cadigal Aboriginal tribe, was hosted and jointly organised by the Australian Surveying and Spatial Sciences Institute. The welcome addresses were made by Jonathan Saxon, who represented SSSI on behalf of president Michael Giudici, minister of lands Tony Kelly and congress director Paul Harcombe. FIG president Stig Enemark also gave an opening address, stating:

"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. Dr Marie Basir officially opened the congress as governor of New South Wales. She said she had "been increasingly interested in and appreciative of the contribution of surveyors" and called them "the modest and often unsung heroes of civilization." Dr Bashir also unveiled a statue of James Meehan, one of Australia's surveyor pioneers.

Dr Tim Flannery, chairman of the Copenhagen Climate Council and an internationally acclaimed scientist, conservationist and explorer, gave the keynote address. He 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."

Day to day business

Over 800 technical papers were presented at the congress, using up to 10-12 parallel

sessions. Most were presented for a full 15 minutes, with some five minute flash presentations giving an overview of the work.

The technical sessions were very popular, with up to 100 delegates attending those of commissions 5 (positioning and measurement) and 6 (engineering surveys). About 10% of the papers were passed through FIG's peer review process, which illustrates the quality of papers at the congress.

Plenary sessions were held every day in a large conference room at the Sydney Conference Centre and were packed, with 2,000 or more people. The sessions were based around four subject areas:

- FIG achievements over the past four years.
- Spatially enabled society.
- The big challenges facing surveyors and society as a whole.
- Technological futures.

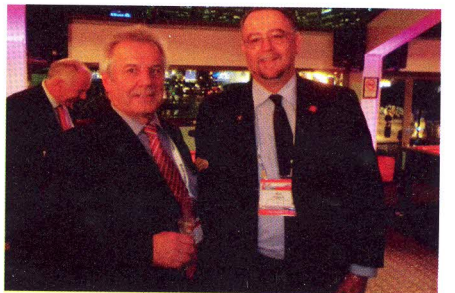
The first session was presented by Stig Enemark who, as well as FIG president, is a professor at Aalborg University in Denmark. The achievements of FIG include a most impressive list covering not only conferences, working weeks and joint events with partners like the World Bank, the United Nation's Food and Agriculture Organization and UN-HABITAT, but also several projects and achievements. ICES is a major player in these events and on the international scene through its involvement with FIG, not least through the position of Andrew Morley as chair of commission 10 (construction economics and management) and myself as chair elect of commission 6 (engineering surveys).

The second plenary session saw talks by the Global Spatial Data Infrastructure's president Dr Abbas Rajabifard, the Pan American Institute of Geography and History's president Santiago Borrero, and surveyor general of New South Wales Warwick Watkins. Dr Rajabifard's talk featured the statement:

"Spatially enabled society is a scenario where a society manages its information spatially by using a spatial component. This requires data and services to be accessible and accurate, well-maintained and sufficiently reliable for use by the majority of society which are not spatially aware."

A transition needs to be made from spatial information management to managing information spatially. Better links need to be made between politics and the various surveying disciplines. Santiago Borrero also challenged FIG to take a lead in this.

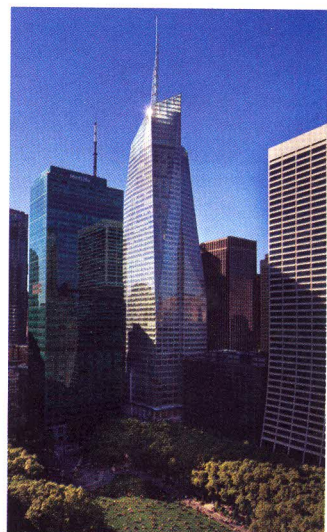
The third plenary session covered the challenges facing society in terms of climate change, natural disasters, urban



Top: From one president to another Teo CheeHai (l) with Stig Enemark.

Middle: Governor of NSW Dr Marie Bashir receiving of replica of the statue of James Meehan from Warwick Watkins, the state's surveyor general.

Bottom: Ken Hall with FIG VP Matt Higgins.



The best tall buildings of 2010

The Council on Tall Buildings and Urban Habitat has named its top four buildings of 2010. Awarded by region, the winners are:

- **Americas: Bank of America Tower, New York**
366m tall, 55 floors, Cook and Fox Architects, Severud Associates Consulting Engineers, Jaros Baum and Bowles, Tishman Construction
- **Asia and Australasia: Pinnacle@Duxton, Singapore**
163m tall, 51 floors, ARC Studio Architecture and Urbanism, RSP Architects Planners and Engineers, Housing and Development Board, SIPM Consultants, Chip Eng Seng Contractors
- **Europe: Broadcasting Place, Leeds**
70m tall, 23 floors, Feilden Clegg Bradley Studios, Halcrow Yolles, KGA, George Downing Construction
- **Middle East and Africa: Burj Khalifa, Dubai**
828m tall, 163 floors, Skidmore Owings & Merrill, Samsung Engineering and Construction, Arabtec, Besix

Entrants were judged on several criteria, including design, sustainable attributes, technical innovations and the enhancement they will provide to the communities in which they are built. The four will now vie for the title of overall best tall building to be awarded in October.

CTBUH has also announced two lifetime achievement awards. Architect William Pedersen of Kohn Pedersen Fox Associates, whose designs include the International Commerce Centre in Hong Kong and the Shanghai World Financial Centre, is honoured along with Ysrael A Seinuk, a civil engineer who specialises in the design and construction of high-rise concrete and steel buildings, whose works include the O-14 building in Dubai and the Trump World Tower in New York.

Clockwise from top left: Singapore's Pinnacle@Duxton ©ARC Studio, Leeds' Broadcasting Place ©Cloud 9 Photography, the world's tallest building in Dubai – the Burj Khalifa ©Skidmore, Owings & Merrill, the Bank of America Tower in New York ©David Sundberg-Esto



Down in the river

Arup has recently overseen sculptor Antony Gormley's latest installation. Six of the artist's trademark lifesize figures have been placed in Edinburgh's Water of Leith – four of them in the river itself.

The work required a comprehensive pre-installation study of the ecology in the river and the impact of the figures on water flow. Arup's project manager Ian Downie said: "We modelled the river at each location to establish approximate river velocities and water levels. In turn, we designed the statues to topple over under particular flood loads, by creating a hinged baseplate with shear pins that are designed to fail due to a degree of debris build up or a log impact."

The £400,000 installation, known as 6 Times, was sculpted for the National Galleries of Scotland, and opened in June.



Dressing for the occasion. Missing his flight meant Gethin made it into the commission chair group shot. Pictured (l-r) Mikael Lilje, Gethin Roberts, Stig Enemark, Daniel Roberge, Wafula Nabutola and Frances Plimmer.

growth and land governance. These challenges also face surveyors, and are relevant to us all. Talks were given by Dr Daniel Fitzpatrick on the 2010 UN guidelines on addressing land issues after natural disasters, the FAO's Dr Paul Munro-Faure on the principles of good land governance based on FAO studies and guidelines and UN-HABITAT's Dr Mohamed El-Sioufi on climate change and sustainable cities.

The last plenary session was on technological futures. Dr Mary O'Kane and Ed Parsons discussed the Google Earth and internet approaches whilst FIG vice president Matt Higgins covered the increasing role of positioning techniques.

Commission 6: My plans for the future

Commission 6 (engineering surveys) held nine sessions and joint sessions, mainly with commission 5 (positioning and measurement).

In addition to the technical sessions, the congress gave me a chance to further my plans for the four years of my chairmanship of commission 6. So far, my plans are for four working groups; (i) deformation monitoring and analysis, (ii) engineering surveys for construction works and structural engineering, (iii) machine control and (iv) ubiquitous positioning systems (a joint group with commission 5).

A workshop on deformation monitoring is planned to be held in Hong Kong in November 2010. There are also plans to hold a workshop on machine control and engineering surveys in the UK in 2011 – watch this space!

ICES at FIG

ICES held a reception on the evening of 14 April. This was hosted by Ken Hall and myself, and the many attendees included FIG vice presidents Matt Higgins, Teo CheeHai and Dr Dalal S Alnaggar. This event was very successful in exposing ICES to the international surveying community.

Also during the congress week, ICES signed a memorandum of understanding with the Australian Surveying and Spatial Sciences Institute (SSSI), which should open opportunities for both sets of members in each others' countries. Also, the New Zealand Surveying Institution presented a memento to ICES president Ken Hall to strengthen the memorandum of understanding previously signed.

FIG, the future

During the general assemblies held at the congress, various votes took place on the governance of FIG. The major areas voted for included the positions of president, vice presidents and commission chairs. A number of people put themselves forward as candidates for vice president and the four year president's position starting in January 2011. As reported in last month's CES, Teo CheeHai from Malaysia was elected FIG president. Dr Chryssy Potsiou from Greece and Professor Rudolf Staiger from Germany become vice presidents for the period 2011-2014. The two are joined by ICES fellow Iain Greenway and Dr Dalal S Alnaggar from Egypt as vice presidents for 2011-2012.

Working weeks are planned in Marrakech from 18-22 May 2011 and Rome from 6-11 May 2012. New chairs were appointed for the ten FIG commissions (from 2011-2014). All current chairs elect

were appointed and because there were no further candidates the appointment took place by acclamation. The new chairs will be:

Commission 1 (professional standards and practice)

Leonie Newnham, Surveying and Spatial Sciences Institute, Australia

Commission 2 (professional education)

Professor Dr Steven Frank, American Congress on Surveying and Mapping

Commission 3 (spatial information management)

Professor Yerach Doytsher, Association of Licensed Surveyors in Israel

Commission 4 (hydrography)

Dr Michael Sutherland, Canadian Institute of Geomatics

Commission 5 (positioning and measurement)

Mikael Lilje, Association for Chartered Surveying, Property Evaluation and Transactions, Sweden

Commission 6 (engineering surveys)

Dr Gethin Wyn Roberts, ICES, UK

Commission 7 (cadastre and land management)

Daniel Roberge, Canadian Institute of Geomatics

Commission 8 (spatial planning and development)

Wafula Nabutola, Institution of Surveyors of Kenya

Commission 9 (valuation and the management of real estate)

Professor Frances Plimmer, RICS, UK

Commission 10 (construction economics and management)

Robert Šinkner, Czech Union of Surveyors and Cartographers

Dust anyone?

On the morning of Friday 16 April, I was meant to fly back to the UK on the 6am flight from Sydney to Heathrow via Dubai with my colleague Dr Martin Smith from the University of Nottingham. I was due to run a surveying field course at 10am on the Saturday morning with 50 first year civil engineering students. Having woken up at 3am, and caught the taxi to the airport for 4am, it was confirmed that we couldn't fly back due to the ash cloud from the Icelandic Eyjafjallajökull volcano. We were stranded in Sydney for a further five days. My thanks go to David Park, Joe Ryding and Garfield Young for running the Nottingham field course in my absence. However, despite missing out on that, the delay meant I was free to attend the FIG general assembly (but I wasn't quite dressed for the occasion, with my suit being squashed in my suitcase).

Initially we were told that we couldn't fly back until 29 April, but in true surveying style, we managed to re-route our flight to Athens on the 20th, and flew back to Heathrow on the 21st via Paris. We made it, but our bags took a further six days to travel from Paris to Nottingham – c'est la vie. Had the ash cloud occurred a week earlier, it would have proven disastrous for the European participation at the congress.

Overall, the congress was an excellent event, allowing surveyors from various countries to interact, both on a technical and networking level. ICES was represented at all levels, through technical papers presented by members, the ICES reception, and two members being chair and chair elect of FIG commissions.

Dr Gethin Wyn Roberts FCIInstCES, Chair Elect FIG Commission 6: Engineering Surveys

Gethin is currently the chair of FIG working group 6.4 (engineering surveys for construction works and structural engineering) and task force 6.1.4 (monitoring and analysis of cyclic deformations and structural vibrations). At Sydney 2010 he represented ICES, as well as presented two papers based on the research he is involved with at the University of Nottingham, and chaired/co-chaired seven sessions. Further information including the technical papers from the congress can be found on www.fig.net

Photos ©FIG, Gethin Roberts and Alan F Wright



Taking a new look

FIG Young Surveyors

*Cecilia Lindén, Chair, FIG Young Surveyors Network
(Cecilia is pictured (l) with Kate Fairlie, chair elect)*

Starting from this year, the network has gained a commission like status within FIG, and this means that we have a small budget for the first time and more assistance from the office in Copenhagen.

The main goal, and the reason this network was started in the first place, was to bring out to young surveyors in the world the possibilities that they can create for themselves by engaging with FIG. If you are interested in international contacts for working abroad after your studies, this is the network for surveyors on the international arena.

As chair from 2011-2014, Australia's Kate Fairlie will face her biggest challenge in getting FIG's member organisations to realise that they need to support a young surveyor to be their national young delegate.

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facebook FIG Young Surveyors

The ICES Network contact for FIG Young Surveyors is Alex Maddison. Alex can be contacted via ICES HQ at membership@cices.org

A CONGRESS with over 2,000 participants from 100 countries is a cultural melting point and the atmosphere at such an event is vibrant. The International Federation of Surveyors (FIG) congress from 11-16 April in Sydney was special to me as it was my last conference as chair of the FIG Young Surveyors Network.

It was at the FIG congress in Munich in 2006 that the idea for a student working group first came about. The main reason for this was that we saw the advantages of networking and sharing experiences across country boundaries. Another reason was the average age within FIG – and that is still a large motivator for doing this job. As a wiser participant stated during one of the meetings at the FIG congress in Sydney:

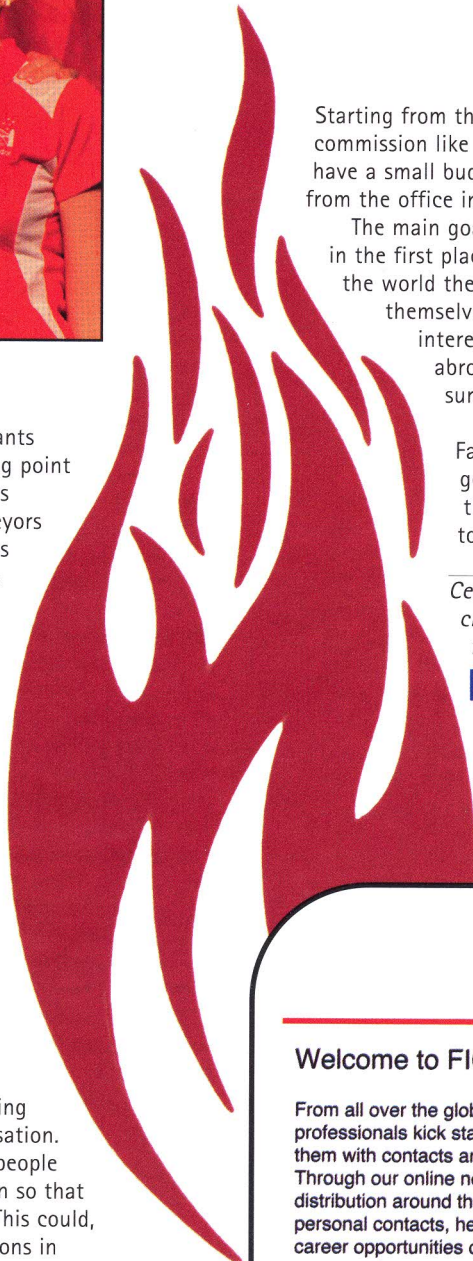
"Us old farts have not realised, nor want to realise, how old we have become."

By establishing a young surveyor delegate from each of the member organisations, it is our belief that this would help a lot in vitalising and bringing new ideas into FIG as an organisation.

The young surveyors delegates need to be people who are involved in their national organisation so that their involvement will bring something back. This could, in the long term, also help national organisations in their renewal; this in most countries where attracting young people to the profession is an issue.

At the FIG working week in Eilat 2009, the word network was added to the FIG Young Surveyors. What this means in practice is that, as a network, this movement gets a higher status within the organisation. Also, it means this will be a platform for young people who are interested in working internationally and we hope this will make both FIG and its member organisations more attractive to young people.

The target group for the FIG Young Surveyors Network is all young surveyors (students and young professionals) up to 35. That does not mean that you are old over 35, just that we had to limit the target group.



Welcome to FIG Young Surveyors!

From all over the globe, we aim to help young professionals kick start their careers by providing them with contacts and services through FIG. Through our online network, newsletters and distribution around the globe, we can help you make personal contacts, help to find you education and career opportunities overseas or simply just meet new people.



With members from Sweden, Turkey, Poland, Germany, Nigeria, UK, USA, Hong Kong and Australia to mention some countries, but we're looking to expand our network further! Take the challenge and join FIG Young Surveyors!

If you'd like to be involved, you can join our group by sending us an email at

FIG_Young_Surveyors-subscribe@yahoogroups.com

Or join the group **FIG Young Surveyor** at Facebook

Get involved today!