

**Report for the 26th General Assembly
FIG Working Week in Paris, 13-17 April 2003**

**FIG Commission 6 – Engineering Surveys
Report on Activities 2002–2003**

1. General

A substantial part of the results from Commission 6 is the holding of symposiums and seminars within professional specific fields. In general, the number of participants to these seminars is high and therefore the goal of knowledge sharing has been obtained.

At the same time it is also important to build up professionally relevant international networks and personal friendships and therefore we make an effort to have additional general commission meetings where all the national delegates and other professionals who may have an interest are invited. These commission meetings are used to discuss the professional content of the work plan and at the same time they function as a perfect opportunity to involve more people actively in the working groups.

During the Congress in Washington two commission meetings were held and in addition to a Commission 6 evening with dinner and social activities. It is the intention to have commission meetings in connection to all future symposiums and seminars for commission 6.

2. Newsletter

With support from the FIG Office the website of Commission 6 has been re-designed and is regularly updated with actual news.

To improve the flow of information and the interest for Commission 6 activities, we have chosen to publish a newsletter approximately twice a year. In first place the content should be an appetiser for future activities and also a way to report from events that have been carried out including links to proceedings and co-organisers. However, it will also be open to publish selected professional articles and experiences.

The first issue has been sent out in February 2003. The publication will take place through direct mail to national delegates, working group members and other persons with contact to Commission 6.

3. Working Groups

The professional work is executed in the working groups, which explain the importance of getting these groups going. Each working group is now occupied with the planning and performance of the period's activities, which include a number of symposiums and seminars, in addition to four specific projects. Within the framework of the working groups relevant task forces have been established to carry out these projects.

List of working groups and current Task Forces including their chairperson including report from each Working Group:

Working Group – Deformation Measurement and Analysis

Chair: Adam Chrzanowski (Canada); Vice-chair Cecilia Whitaker (USA)

Task force 6.1.1: Measurements and Analysis of Cyclic Deformations and Structural Vibrations

Chair: Gethin Roberts, UK

Task force 6.1.2: Use of Satellite Radar Interferometry in Deformation Measurements

Chair: Xiaoli Ding, Hong Kong

Progress Report

The main activity in the period has been preparing the 11th International Symposium on Deformation Measurements. Stathis C. Stiros is chairing the organising committee for this Symposium, which will be held in Santorini, Greece, May 2003. At the deadline for abstracts, 120 proposals was received, which means that a fully and interesting program is expected.

Working Group 6.2 – Engineering Surveys for Industry and Research

Chair: Thomas Wunderlich (Germany); Vice-chair: Alojz Kopacik (Slovak)

Task force 6.2.1 'Laser Scanner'

Progress Report

During the first months of its mandate WG6.2 has focussed on the promising field of Terrestrial Laser Scanning. For one special product (Cyrax2500) there has been a one-day user meeting at Munich (sponsored by Leica Geosystems Munich) which resulted in the strong wish to facilitate and accelerate the evaluation and modelling process as well as the introduction of large point clouds into CAD software solutions. Meanwhile this manufacturer has made good progress and delivered upgraded software solutions (Cloudworks, CloudConstraint in Cyclone) which appear to relieve much burden of the operator. In course of past and upcoming technical conferences in the field of Engineering Surveying and Civil Engineering (INGEO 2002, Bratislava; Ingenieurgeodäsie 2003, Graz; FIG-Working Week 2003, Paris and Automatic Data Collection in Construction Processes 2003, Las Vegas; O3d6, Zurich) networking of the main manufacturers of Laser Scanners (Callidus, Leica, Mensi, OptechOy, Riegl, Zoller&Fröhlich) with specialists from the scientific and practical user community will be stimulated by WG6.2. The main purpose is to identify new fields of application for the technology and to encourage the use of Terrestrial Laser Scanning by our profession as soon as possible.

WG6.3 – Engineering Survey Data Bases and Facility Management

Chair: Lothar Gründig (Germany); Vice-chair Hande Demirel (Turkey)

Progress Report

During the last year we have been intensifying our work on data acquisition and management methods for building documentation. There will be a special session at the FIG working Week in Paris regarding the activities of the working group.

WG6.4 – Engineering Surveys for Construction Works and Structural Engineering

Chair: Gethin Wyn Roberts (UK); Vice-chair: Jin Fengxiang (China)

Task force 6.4.1 'Fibre Optic Sensors'

Chair Fritz K. Brunner (Austria)

Progress Report

There has already been some activity within this group at a one to one level. Members of this working group attended the FIG Congress in Washington and presented a variety of papers relevant to this field.

It is planned to expand this group to more than only surveyors. It is planned to include structural and civil engineers for example, who will benefit from the work being undertaken as well as contribute to the overall understanding. Furthermore, international groups concerned with structural engineering will be contacted and informed about forthcoming meetings.

A conference will be held at the University of Nottingham in the Summer of 2004. This workshop will be the main gathering of this working group outside of the Congress and Working Weeks. The conference will be aimed at surveyors and engineers, and will attempt to broaden itself to more than only the surveying and analysis of the data. A workshop for Task Force 6.1.1 will also be held at the Nottingham Conference. Furthermore, papers and sessions will be held at the Nottingham Conference covering the topic of Task Force 6.4.1 "Fibre Optic Sensors".

Members of this group also participated in the IAG/FIG conference in Berlin in May 2002. Sessions for this working group will be organised during forthcoming Working Weeks and Congress meetings.

Papers about the use of embedded fibre optic sensors for the measurement of bridge deformations will be presented at the forthcoming conferences in Santorini and Zurich. A one-day workshop about the foundations of measurement techniques with special consideration of fibre optic sensors will be presented at the International Course for Engineering Surveying, 2004, Zurich. Dedicated sessions will be prepared for the Nottingham Conference about fibre optic sensors.

4. Events 2002

INGEO 2002, 2nd International Conference of Engineering Surveying

Commission 6 co-sponsored this conference, which was held in Bratislava 11-13 November 2002. The conference attracted 76 participants from 9 countries and a large number of professional highly qualified papers were presented. During the conference an important agreement for Commission 6 was concluded. It was agreed to continue to cooperate with future conferences on Engineering Surveying to be held in one of the Eastern European countries on a regular basis. So far most of Commission 6 activities have taken place in Northern America, Eastern Asia and Western Europe. As also the majority of the active delegates have come from these parts of the world, Commission 6 is pleased to welcome this

new alliance which gives room to a extensive network in all of the previous Eastern European countries.

5. Calendar of Events

2003

- 11th International Symposium on Deformation Measurements, Santorini, Greece, 25-28 May 2003;
- FIG Working Week, 13-17 April 2003, Paris
- Optical 3-D Measurement Techniques, 22-25 September 2003

2004

- Workshop on Vibration and Cyclic Deformations, Nottingham, UK, 2004
- FIG Working Week, Athens Greece 23-28 May 2004
- Tutorials as part of the "International Course for Engineering Surveying", Zürich, Switzerland, 15-19 March 2004
- Workshop on Engineering Survey Data Bases and Facility Management, Berlin, Germany, 2004 or 2005

2005

- 12th International Symposium on Deformation Measurements, China or France, 2005;
- FIG Working, Week, Cairo, Egypt, 7-12 May 2005

February 2003

Svend Kold Johansen
Chair, FIG Commission 6

Commission web site: <http://www.fig.net/figtree/commission6/index.htm>