Plan of Work
1996-99

October 1995
FIG Plan of Work
October 1995

CONTENTS

INTRODUCTION 4

BUREAU PLAN OF WORK, 1996 - 99 4
Annex A - FIG: Aim and Objectives 10
Annex B - Responsibilities of Bureau members 11

COMMISSION RESPONSIBILITIES 13

COMMISSION WORK PLANS, 1994 - 98 15
(including contact details of Commission Officers and Working Group Chairmen)

COMMISSION 1
COMMISSION 2 17
COMMISSION 3 20
COMMISSION 4 24
COMMISSION 5 26
COMMISSION 6 31
COMMISSION 7 34
COMMISSION 8 37
COMMISSION 9 40
INTRODUCTION

This document lists the tasks which FIG will undertake during 1996-99. It comprises a plan of work for the Bureau, in relation to the administration and forward planning of the Federation; and plans of work for each of the nine commissions which pursue FIG's professional and technical objectives. It is, however, the Bureau which has overall responsibility for fulfilling this plan, in its role either as an executor or, in the case of commission-led activities, as a facilitator and co-ordinator.

The Bureau's plan of work is governed by FIG's aim and objectives, included at Annex A. Responsibilities of individual Bureau members are included at Annex B.

BUREAU PLAN OF WORK, 1996 - 99

SECTION 1 - “Developing the Profession in a Developing World”

1.1 During 1996-99 FIG will focus on the surveyor’s response to social, economic, technological and environmental change. The Bureau will take particular interest in countries in economic transition and in those with a low gross national product (GNP). The Bureau also recognises that markets for surveyors’ services are constantly changing. The emphasis will accordingly be on strengthening professional institutions; promoting professional development; and encouraging surveyors to acquire new skills and techniques so that they may be properly equipped to meet the needs of society and the environment.

1.2 The Bureau will promote the FIG Education Foundation and the substantial contribution which its support will make to the realisation of FIG's objectives.

1.3 The Bureau will support FIG's member associations and technical commissions and will strengthen and streamline FIG's operating structures.

In particular, the Bureau will
a) promote FIG and the full range of surveying services throughout the world;
b) develop FIG's contacts with international agencies and non-governmental organisations (NGOs) whose activities relate to those of surveyors;
c) help associations of surveyors to gain recognition by their governments, not as trade associations or solely as learned societies but rather as regulated or self-regulating professional bodies;
d) extend FIG’s membership throughout the world and particularly in areas where it is presently under-represented;
e) provide opportunities for continuing professional development by organising seminars and workshops, particularly in developing countries;
f) improve communication between the Bureau and member associations and, through them, to their individual members;
g) progress the work that has already been initiated to establish a permanent office and the FIG Education Foundation.

SECTION 2 - Strategic and Forward Planning

2.1 The Bureau will undertake such forward planning as is needed for the development of short-, medium- and long-term strategies for FIG, to accommodate the objectives of successive Bureaux and ensure continuity of work; to accommodate FIG's fast-changing and fast-growing membership profile; to provide the means for harnessing individual energies and initiatives; and to generate a feeling of involvement throughout FIG's membership.

2.2 The Bureau will seek contributions to the evolution of FIG and to its planning processes, inter alia, from the advisory committee of commission officers, the membership, and break-out sessions of the Permanent Committee.

SECTION 3 - Marketing and Promotion

3.1 Marketing FIG
The Bureau will prepare and implement an FIG marketing strategy to determine targets, methods and materials for promoting FIG externally (including to potential sponsor members) and internally (to individual members of member associations).

3.2 Developing Countries
The Bureau will encourage greater participation in FIG by developing countries and will
a) act as the focal point for FIG initiatives in developing countries;
b) encourage each commission to hold at least one meeting, with an accompanying CPD programme, in a developing country;
c) promote 'FIG twinning' arrangements between member associations to facilitate professional development and the exchange of appropriate technology, personnel and general support;
d) co-operate with other bodies with interests in developing countries;
e) encourage the development of networks between commissions and within specific geographical zones, to enable good educational practice to be communicated and for the establishment of mutual support systems.

3.3 Promotion of National Associations
The Bureau will assist countries which do not yet have professional associations and those in which the associations are in a formative stage. In particular it will
a) establish a task force to prepare guidelines for constituting professional associations, covering, inter alia, suitable structures, educational standards, ethical standards and a list of functions a professional association might undertake;
b) make contact with those who can form the nuclei of new professional
associations or help existing associations through the provision of material and governmental support;
c) make contact with government departments whose support (through the enactment of legislation where necessary) is needed for the establishment and effective functioning of professional associations.

SECTION 4 - Liaison with International Agencies and NGOs

4.1 The Bureau will appoint a task force on FIG's relations with UN agencies and other international or regional NGOs whose activities relate to those of the surveyor. Wherever possible personal contact will be established with key members of these organisations.

4.2 Aid Agencies: Generally
The Bureau will
a) build a database of agencies which fund or sponsor projects in which surveyors should be involved;
b) operate and develop the protocol for the identification of surveying consultants;
c) keep member associations informed of opportunities for working with aid agencies and encourage surveyors to make contributions at seminars and workshops organised by key agencies.

4.3 UN Agencies
The Bureau will
a) ensure on-going FIG/FAO and FIG/HABITAT collaboration;
b) develop contacts between FIG and UNEP;
c) participate in the HABITAT II world conference in Istanbul in June 1996;
d) develop contacts with the UN Sustainable Development and Environmental Management Branch (SDEMB) and ensure FIG participation in survey-related activities for which the Branch is responsible (including UN regional cartographic conferences);
e) develop contacts with UNESCO, the UN Statistical Office and any other organisations responsible for international educational and occupational classifications and endeavour to ensure that surveying and surveying activities are correctly represented within the professional sections of all such classifications;
f) keep under review FIG's contacts with the UN Department of Public Information (NGO section);
g) develop contacts with any other UN agencies whose activities are concerned in any way with the practice of the surveying profession.

4.4 World Trade Organisation
The Bureau will develop links with the World Trade Organisation (WTO) and maintain FIG's input, so far made via the OECD, to the development of the general agreement on trade in services.

Other Non-Governmental Organisations (NGOs)
4.5 In respect of international and regional organisations the Bureau will
a) build a database of organisations whose activities relate to those of surveyors;
b) encourage a reciprocal exchange of articles between FIG and each such organisation, for publication in their respective newsletters;
c) invite members of each such organisation to attend FIG events, including appropriate seminars and workshops;
d) consider organising a session for NGOs at FIG'98.

4.6 The Bureau will nominate two members to attend each meeting of the Executive Board of the International Union for Surveys and Mapping (IUSM). It will nominate four additional delegates, from amongst participants in FIG'98, to attend IUSM's Council meeting in 1998.

4.7 The Bureau will co-ordinate FIG's activities as a Scientific Associate of the International Council of Scientific Unions (ICSU).

SECTION 5 - Technical Commissions; Permanent Institutions

5.1 The Bureau will ensure that FIG's strategic plan (2.1 above) enables it to respond rapidly to changing circumstances - for example, through the creation of commissions with finite life spans.

5.2 The Bureau will review arrangements for financing commissions and permanent institutions.

5.3 The Bureau will review the findings of the Commission 9 working group on construction economics and, if appropriate, establish a separate commission for this discipline.

SECTION 6 - Communications

6.1 The Figtree
The Bureau will maintain and develop the Figtree, currently comprising
a) names, addresses and contact details of
   - Bureau members
   - commission officers
   - member associations
   - sponsor organisations
   - correspondents
   - permanent institutions
   - honorary presidents, honorary members
   - useful contacts outside FIG;
b) Bureau and commission work plans;
c) commission terms of reference;
d) commission delegates;
e) FIG publication list;
f) forthcoming events;
g) FIG statutes and internal rules.
6.2 Communications (General)
The Bureau will ensure that all FIG publications, whether these are published by the Bureau, the member associations or the commissions, are properly recorded within international standard classification systems.

Communications (Internal)
6.3 The Bureau will
a) make maximum use of e-mail, Internet and other developments in information technology (IT) in maintaining and improving communications with member associations, sponsor organisations, correspondents, commissions and permanent institutions, and, through them, with individual members of the surveying profession worldwide;
b) issue a quarterly newsletter (the Bulletin);
c) encourage member associations, sponsors and publishers of all other appropriate journals to make complementary copies available to the Bureau so that their contents can be abstracted, as appropriate, and included in the FIG Bulletin;
d) encourage the commissions to provide regular reports on their activities for inclusion in the Bulletin;
e) encourage member associations to disseminate the Bulletin, or information contained in it, as widely as possible amongst their memberships.

6.4 The Bureau will
a) ensure that documents relating to arrangements for congresses, technical seminars and administrative meetings are issued to members;
b) investigate the possibility of issuing one set of technical papers from selected seminars to members.

6.5 The Bureau will
arrange for its members and other representatives of FIG to visit member associations whenever possible and will encourage visits to the Bureau offices by individuals or delegations from member associations.

Communications (External)
6.6 The Bureau will publish an Annual Review which will serve as FIG's main medium of external communication and its principal marketing tool.

6.7 The Bureau will implement a system for holding FIG publications in computer format and for distributing or otherwise making these available in selected formats.

6.8 The Bureau will promote FIG publications to other outlets - for example, reference and university libraries - that are able to hold, advertise, abstract and disseminate their contents.

Communications (Ad Hoc Publications)
6.9 The Bureau will develop the FIG publication series, reviewing and up-dating existing publications and adding new ones as appropriate. Additions to the series will include FIG policy statements and selected reports from task forces and commissions.
SECTION 7 - Operating Structures

7.1 Administrative Structures
In accordance with the decisions of the 62nd Permanent Committee on the recommendations of the task force on the secretariat the Bureau will
a) integrate the Permanent Committee and the General Assembly and prepare terms of reference and operating procedures for this new integrated body (the General Assembly);
b) introduce the FIG “working week”.

7.2 Permanent Office
The Bureau will progress the decisions of the 62nd Permanent Committee meeting on the recommendations of the task force on the secretariat as these relate to the establishment of an FIG permanent office.

7.3 FIG Education Foundation
The Bureau will work closely with the trustees of the FIG Education Foundation and in particular will
a) assist in canvassing for deposits to the capital fund;
b) identify projects which qualify for Foundation support and apply for funding;
c) ensure that future work plans (commission and Bureau) take full account of the support which the Foundation is able to give to FIG’s work.

7.4 FIG Languages
The Bureau will implement the decision of the 62nd Permanent Committee on the recommendations of the task force on FIG languages.

SECTION 8 - Administration

Finance
8.1 The Bureau will monitor and control its own finances and those of the commissions and the permanent institutions. It will consider likely financial requirements; produce annual budgets and cash flow statements; and publish accounts. It will collect subscriptions, sponsorship fees and other income.

8.2 With a view to augmenting FIG’s income, the Bureau will introduce a policy for marketing selected FIG publications.

8.3 The Bureau will develop a long-term financial strategy for FIG which will, inter alia, examine the present strategy for structuring annual subscriptions and the existing plateau applying to member associations.

Membership
8.4 In progressing the recommendations of the task force on membership extension the Bureau will undertake a comprehensive review of categories of and criteria for obtaining membership of FIG.
Amendments to the Statutes and Internal Rules
8.5 The Bureau will draft amendments to the statutes and internal rules to implement statutory changes approved since the 1994 General Assembly.

Meetings of the Bureau
8.6 The Bureau will meet at least twice a year, once during the FIG working week and once at a venue in the UK. Additional meetings may be convened if required.

8.7 The proposed dates and venues are

<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1996</td>
<td>Argentina</td>
</tr>
<tr>
<td>October 1996</td>
<td>UK (Coventry)</td>
</tr>
<tr>
<td>May 1997</td>
<td>Singapore</td>
</tr>
<tr>
<td>November 1997</td>
<td>UK (Manchester)</td>
</tr>
<tr>
<td>July 1998</td>
<td>UK (Brighton)</td>
</tr>
<tr>
<td>January 1999</td>
<td>UK (Edinburgh)</td>
</tr>
<tr>
<td>summer 1999</td>
<td>South Africa</td>
</tr>
<tr>
<td>autumn 1999</td>
<td>UK (London) or USA</td>
</tr>
</tbody>
</table>

XXI Congress 1998
8.8 The Bureau will progress arrangements for the XXI congress (FIG'98) in Brighton, on 19-25 July 1998.

ANNEX A - FIG: Aim and Objectives

The International Federation of Surveyors (hereinafter called “the Federation”) was founded in 1878.

AIM
FIG is an international, non-governmental organisation (NGO) whose aim is to ensure that the disciplines of surveying and all who practise them meet the needs of the markets and communities that they serve.

OBJECTIVES
1. To provide an international forum for the exchange of information about surveying and for the development of fellowship between surveyors.

2. To collaborate with the United Nations and other international agencies in the formulation and implementation of policies affecting the use, development and management of land and marine resources.

3. To promote the disciplines of surveying, particularly in developing countries and countries in economic transition.

4. To promote the role of the surveyor in the management of natural and man-made environments.
5. To promote the development of national associations of surveyors and to promote professional standards and codes of ethics and the exchange of surveying personnel.

6. To promote high standards of education and training for surveyors and to facilitate continuing professional development (CPD).

7. To encourage the development and proper use of appropriate technology.

8. To encourage research in all disciplines of surveying and to disseminate the results.

ANNEX B - Responsibilities of Bureau Members

The individual responsibilities of the members of the Bureau shall be as follows

President
* provide the professional leadership of the Federation;
* take appropriate initiatives to ensure that FIG achieves its principal objectives as laid down in article 1 of the statutes and defined within the plan of work;
* clarify and communicate a future vision for FIG;
* promote FIG to external agencies and ensure the co-ordination of FIG’s relations with such agencies;
* recommend and ensure the appointment of working parties (task forces) to undertake specific tasks which are not within the ambit of the commissions;
* consult commission officers and the member associations regarding the Bureau’s nominees as incoming vice chairmen of commissions;
* consult the Permanent Committee whenever a question arises outside the administrative powers of the Bureau;
* submit a written report to each meeting of the Permanent Committee.

Secretary General
* ensure the day-to-day running of FIG and the administration of its internal affairs;
* scrutinise, seek the necessary approvals for and process membership applications;
* ensure the preparation of and distribute agenda and papers for and minutes of FIG’s administrative meetings;
* monitor the implementation of all decisions of FIG’s administrative meetings;
* oversee the implementation of FIG’s publications and information policy;
* ensure the production of FIG publications and computer-generated information;
* transmit FIG decisions, publications and computer-generated and all other relevant information to all members;
* prepare proposals for consideration by the Bureau for the modification of the statutes and internal rules;
* ensure that FIG works within its statutes and internal rules;
* submit a written report to each meeting of the Permanent Committee.
Treasurer
* be responsible for all financial policy and its implementation;
* recommend levels of members’ fees and subscriptions and sponsors’ fees;
* advise the Bureau of members whose annual fees are in arrears;
* ensure the preparation of annual budgets, accounts and financial reports for approval by the Permanent Committee;
* ensure that annual accounts are audited and submitted to the Permanent Committee;
* provide the link between FIG and the Bureau and the FIG Education Foundation;
* submit a written report to each meeting of the Permanent Committee.

Vice Presidents
Each Vice President shall be required to
* chair working parties (task forces) as appropriate;
* attend meetings of the advisory committee of commission officers;
* report to meetings of the Permanent Committee.

The separate responsibilities of Vice Presidents shall be as follows

Vice President (A) - the designated incoming President
* chair the advisory committee of commission officers;
* oversee the development of FIG’s strategic plan;
* prepare the incoming Bureau’s plan of work for inclusion in FIG’s plan of work;
* ensure that commission chairmen develop their plans of work for inclusion in FIG’s plan of work;
* ensure that commission chairmen implement tasks assigned to them in congress resolutions and plans of work;
* ensure liaison as required between the commissions.

Vice President (B) - nominated by the outgoing Bureau
* be responsible for broadening the membership base;
* encourage member associations to play a full part in FIG activities (inter alia by nominating delegates to commissions, participating in meetings, and contributing to and distributing publications and computer-generated information);
* advise on the continuity of policy in the affairs of FIG.

Vice President (C) - from the current Bureau
* ensure the maintenance, co-ordination and development of FIG’s liaison with NGOs and other professional bodies;
* co-ordinate the work of the task forces;
* oversee the organisation of technical meetings held during FIG working weeks;
* co-ordinate programmes for other FIG workshops and seminars;
* assist professional development, inter alia by ensuring that FIG events are organised in all parts of the world, including less developed countries and those in economic transition.
Congress Director
* draw up the agenda and programme for the meetings of the congress, for approval by the Permanent Committee;
* ensure the despatch of all documents relevant to the congress;
* be responsible for all the congress arrangements, having regard to FIG internal rule no 5;
* consult the Bureau on congress matters that relate to FIG policies and workplans - for example, the format and content of the opening and closing ceremonies;
* submit periodic reports to the Permanent Committee.

COMMISSION RESPONSIBILITIES

The commissions, under the guidance of their chairmen, are responsible for pursuing FIG's technical and scientific objectives, largely through the implementation of resolutions adopted at the conclusion of the technical programmes which they organise at each FIG congress.

Between them, the commissions cover all the activities listed in the FIG definition of a surveyor. Most appoint working groups to progress specific aspects of their work.

Each commission chairman works with the assistance of a vice-chairman and a secretary. All serve for a four-year term which starts at the end of one congress and concludes at the end of the next congress. Member associations may each appoint one delegate to each commission.

In addition to delivering the technical programmes at congresses, commissions and their working groups organise numerous other seminars and conferences on technical and professional topics, either individually or jointly; usually in collaboration with an FIG member association or an allied international professional society; and increasingly in partnership with a UN or other funding agency, with a view to assisting professional development in developing countries and those in economic transition.

Commission 1 - Professional Standards and Practice
International codes of ethics.
Guidelines relating to the provision of services.
Standards of business practice and total quality management.
Changes affecting the operation of surveying practices, their management and their professional structures.
International legislation affecting the profession.
The role of surveyors in the public sector.

Commission 2 - Professional Education
Education and teaching methods.
Continuing professional development and training.
The interaction between education, research and practice.
Encouragement of the exchange of students and personnel between member countries.
Commission 3 - Land Information Systems
Land and geographic information systems - their design, establishment and administration.
Methods used for the collection, storage, analysis and dissemination of and access to data within those systems.

Commission 4 - Hydrography
The marine environment.
Hydrographic surveying.
Data processing and management.
Nautical charts and bathymetric maps - analogue, digital and electronic.
Other associated tasks.

Commission 5 - Positioning and Measurement
The science of measurement.
Acquisition of accurate, precise and reliable survey data related to the position, size and shape of natural and artificial features of the earth and its environment.

Commission 6 - Engineering Surveys
Acquisition, processing and management of topographic and other related information throughout the life cycle of a project.
Setting out methods in engineering projects.
Validation and quality control for civil construction and manufacturing.
Deformation monitoring, analysis and interpretation.
Prediction of deformation in engineering projects, mines and areas of geological hazard.

Commission 7 - Cadastre and Land Management
Land management and administration.
Cadastral reform and multi-purpose cadastres.
Parcel-based land information systems and computerisation of cadastral records.
Cadastral surveying and mapping.
Land titling, land tenure, land law and land registration.
Urban and rural land consolidation with emphasis on environmental and economic issues.
National and international boundaries.
Land and marine resource management.

Commission 8 - Spatial Planning and Development
Regional and local structure planning.
Urban and rural land use planning.
Planning policies and environmental improvement.
Urban development and implementation.
Environmental impact assessment.

Commission 9 - Valuation, and the Management of Real Estate
Valuation for various purposes, including property taxation and company accounts.
Property investment and development finance.
Management of property holdings, at strategic and single asset levels.
Maintenance of systems to ensure the efficient use of resources.
Management of corporate property and investment planning, including takeovers and mergers.
Management of public sector property, including advice on housing finance.

Note: Commission 9 has established a working group to consider what might be the best framework for addressing the eighth activity in the FIG definition of a surveyor, namely “The planning, measurement and management of construction works, including the estimation of costs”.

COMMISSION 1 - PROFESSIONAL STANDARDS AND PRACTICE
Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
Commission 1 will arrange a series of sessions and joint sessions. It will also work towards providing one or more non-technical events that will display the work of the surveying profession from an artistic or cultural perspective. It will assist in the organisation of an exhibition of survey art in conjunction with the XXI congress in Brighton, promoting an interest in this initiative at preceding meetings of the Permanent Committee.

2. Working Groups: XX Congress Resolutions
2.1 Resolution 1/1-1994 “that FIG should urge international authorities to recognise the part played by surveyors as being on a par with that played by architects and engineers, in order for surveyors to carry out their responsibilities of defining, quantifying, qualifying and valuing real estate property”. Commission 1 will assist the Bureau as required in the implementation of this resolution. In particular the commission would like to work with the organisers of Permanent Committee meetings to ensure press coverage and exposure for the meetings and the role that the surveyor plays in development in the host country.

2.2 Resolution 1/2-1994 “that FIG should present a request to the United Nations that the remains of this arc of the meridian be added to the World Heritage List of historical monuments”. Commission 1 will assist the Bureau and the ad hoc commission on the history of surveying as required with the implementation of this resolution.

2.3 Resolution 1/3-1994 “that Commission 1 develop a proposal for an FIG policy, including a supporting programme to develop total quality management principles (including quality assurance) for presentation to the 63rd PC meeting in Argentina”. Commission 1 will draft a proposal for an FIG charter of quality for consideration by the 63rd PC meeting in Argentina, as a prelude to developing an FIG policy and supporting programme for discussion at the 64th PC meeting in Singapore. The final report will include a recommendation for the publication and dissemination of the policy.
2.4 Resolution 1/4-1994 “that Commission 1 review the FIG code of ethics adopted at the 1981 congress in Montreux and, if appropriate, make recommendations for its up-dating and expansion; and prepare a draft code of conduct. The congress further instructs the commission to make recommendations for the publication and dissemination of the codes”. Commission 1 will analyse the philosophy of ethical codes and will present proposals for a new code for discussion at the 64th PC meeting in Singapore. The proposals will differentiate between ethical principles and a more detailed standard of conduct; will apply to all members of the surveying profession, whether in the private or the public sector; and will be gender neutral. The final code, which will be presented to the XXI congress in Brighton, will include a recommendation for its publication and dissemination.

3. Other Working Groups
Commission 1 will communicate with all FIG member associations and correspondents, in order to stimulate interest in Commission 1 activities, and to establish a representative in each member country. Commission 1 will work through these delegates and other commission chairmen to generate interest in FIG activities within member countries and, hopefully, to stimulate more interest amongst practitioners in international activities. It will seek to establish working groups on other areas of professional interest such as the role of the surveyor in society and the role of the commission within FIG.

4. Events, Participation, Collaboration
Commission 1 will work towards developing events of interest to the general public which will focus public attention on surveyors at the time of PC meetings and congresses. It will assist member associations with professional development conferences and concerns as requested.

5. Communication
Commission 1 will firm up its delegate structure in member countries and attempt to generate interest amongst all practitioners in FIG activities. Communication is the key to asserting the role of FIG in the international surveying community and communication strategies must be developed to ensure that the many benefits of FIG membership are transmitted to all practising surveyors in all member countries.

6. Papers and Publications
The FIG policy on quality assurance and the FIG code of ethics will be published for dissemination to all members. Commission 1 will make articles on FIG activities available to all member associations and will encourage their publication in association media. It will publish a newsletter three times a year.
7. Officers and Contacts
Mr G K Allred
Chairman, FIG Commission 1
34 Glenhaven Crescent
St Albert
Alberta T8N 1A5, CANADA
Tel: +1 403 429 2224
Fax: +1 403 429 3374

Mr John Parker
Vice-Chairman, FIG Commission 1
Survey Department, Victoria
500-436 Lonsdale Street
Melbourne 3000, Victoria
AUSTRALIA
Tel: +61 3 9603 9000
Fax: +61 3 9603 9099

Dipl Ing Klaus Rurup
Secretary, FIG Commission 1
D-46236 Bottrup
Droste-Hülshoff Strasse 8
GERMANY
Tel: +49 20 411 8830
Fax: +49 20 411 88316

COMMISSION 2 - PROFESSIONAL EDUCATION
Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
Commission 2 will arrange technical sessions, including joint sessions with other commissions. The results of the working groups will be presented by papers or final reports. The work plan, activities of the working groups and progress within resolutions will be reviewed and up-dated and new initiatives will be implemented as necessary.

2. Working Groups: XX Congress Resolutions
2.1 Resolution 2/1-1994: Database on Surveying Education
Commission 2's administration will maintain and extend the database of educational institutions; promote general access to the information; and try to obtain an independent listing for surveying within the UNESCO International Standard Classification of Education.

2.2 Resolution 2/2-1994: Continuing Professional Development
Working Group 2A. Chairman: Dr Tom Kennie (UK)
The working group will continue with the preparation of an FIG policy document, including FIG guidelines on the implementation of CPD within member associations. The work will include promotion of CPD internationally. Important papers and initial reports have already been published. A draft final report will be discussed at the 63rd PC meeting in Argentina. Final publication of an FIG policy document, including a good practice guide, will take place at the XXI congress in Brighton.

2.3 Resolution 2/3-1994: Management Skills
Working Group 2B. Chairman: Dr Christopher Hoogsteden (NZ)
The working group will investigate the changing role of the surveyor; identify appropriate management and problem solving skills required by surveyors in this new role; and recommend educational methods for developing such
skills. An interim report will be prepared for discussion at the 63rd PC meeting in Argentina. Depending on the outcome, this topic will be the subject of a special session at the XXI congress in Brighton.

2.4 Resolution 2/4-1994: Exchange of Personnel and Students
   Working Group 2C. Chairman: Dr Bo Nyberg (S)
   The working group will investigate the extent of organised international exchange; describe examples of good practice; and develop a number of suggestions and guidelines to encourage and facilitate international exchanges, especially as a means of facilitating CPD. The working group will present a report of its findings at the XXI congress in Brighton.

2.5 Resolution 2/5-1994: Quality Assurance
   Working Group 2D. Chairman: Prof. Peter H Morgan (UK)
   The working group will review different methods of quality control that exist within the broad range of surveying education. Examples of good practice will be disseminated. The working group will then focus on creating a quality assurance model capable of application within the different educational systems of the member countries. The working group will present its results at a special session at the XXI congress in Brighton.

2.6 Resolution 2/6-1994: Computer Assisted Learning
   Working Group 2E. Chairman: Prof. Kirsi Artimo (SF)
   The working group will review tools and techniques used in CAL for surveying education; disseminate examples of good practice; and encourage co-operation between universities in the process of developing and applying CAL systems. The efforts of the working group will be reported at a special session at the XXI congress in Brighton.

2.7 Resolution 2/7-1994: Support for Developing Countries
   Commission 2’s administration will investigate ways and means of providing institutional support for the establishment and improvement of surveying education programmes, at all levels, in developing countries and countries in economic transition. Regional working parties will be established for the Pacific and Africa.

3. Other Working Groups
   The chairman of Commission 2 may establish other working groups in order to implement any new initiatives.

4. Events, Participation, Collaboration
4.1 Commission 2 will endeavour to organise working meetings for commission delegates at each PC meeting.

4.2 Commission 2 has already sponsored and contributed to the XV North American Geomatics Teachers Conference held in May 1995 in Quebec, Canada. It participated in the IUSM working group on education, chaired by Prof. Richard Hoisl (D), which discussed a draft IUSM position paper on education; and it contributed to the joint FIG/CASLE seminar held in August 1995 in Harare, Zimbabwe.
4.5 Commission 2 will lead and contribute to the seminar “Education and professional training” to be held during the 63rd PC meeting in Argentina.

4.6 Commission vice-chairman Prof. Kirsi Artimo will organise a workshop on computer assisted learning in the field of surveying on 4 - 6 September 1996 in Espoo, Finland. During this workshop the future work of Commission 2 will be discussed and developed and activities during the XXI congress in Brighton will be prepared.

5. Communication
Commission 2’s administration will continue to disseminate information to national delegates and member associations through articles in the FIG Bulletin, circular newsletters, seminars, etc. All commission officers and delegates will be encouraged to participate in Commission 2 activities.

6. Papers and Publications
6.1 The proceedings of the Commission 2 workshop held in June 1993 in Denmark, “Facing the challenges of the future”, are still available from the commission chairman.

6.2 A leaflet will be prepared to present and promote the database on surveying education (paragraph 2.1).

6.3 In order to promote Commission 2 more actively, a brochure will be prepared setting out its objectives and activities.

6.4 Commission 2 will publish the proceedings of its workshop to be held in September 1996 in Finland (paragraph 4.6).

7. Officers and Contacts
Prof. Stig Enemark
Chairman, FIG Commission 2
Dept of Development & Planning
University of Aalborg
Fibigerstraede 11
DK-9220 Aalborg, DENMARK
Tel: +45 98 15 85 22
Fax: +45 98 15 65 41
e-mail: enemark@i4.auc.dk

Prof. Kirsi Artimo
Vice-Chairman, FIG Commission 2
Helsinki University of Technology
Department of Surveying
Otakaari
SF-02150 Espoo, FINLAND
Tel: +358 0 451 3912
Fax: +358 0 465 077
e-mail: Kirsi.Artimo@hut.fi
(also Chairman, FIG WG 2E)

Mr Jes Ryttersgaard
Secretary, FIG Commission 2
National Survey & Cadastre
Bjerggade 6
DK-6200 Aabenraa, DENMARK
Tel: +45 74 62 37 55
Fax: +45 74 62 08 72
COMMISSION 3 - LAND INFORMATION SYSTEMS
Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
Commission 3 will arrange a number of sessions and joint sessions, in line with the last congress. The session themes will be a follow-up to the resolutions adopted in Melbourne; and will reflect the activities of the working groups.

2. XX Congress Resolutions
2.1 Four resolutions were adopted in Melbourne.

2.2 Resolution 3/1-1994 resolves that FIG should continue to work with appropriate UN bodies and other international organisations to inform them about appropriate methodologies and information systems for the rational sustainable management of natural resources and the environment; and that FIG member associations in industrialised countries should inform and encourage national aid organisations to consider the transfer of geographic information technology and management skills for inclusion in programmes for developing countries.

2.3 Resolution 3/2-1994 recommends that FIG member associations in their respective countries should encourage the establishment of appropriate mechanisms for institutional co-operation and the exchange and combination of data, to foster the implementation of integrated geographic information systems for coastal areas, including both land and adjacent waters; and that Commissions 3 and 4 should establish a joint working group to study these issues.

2.4 Resolution 3/3-1994 resolves to renew FIG resolution 3/2-1990 (on access to data), recommending that public agencies open their registers, map series and data bases to the greatest extent possible, taking due account of privacy, and
apply pricing policies which do not exclude relevant users from access to information and from realising the potential of modern geographic information technology.

2.5 Resolution 3/4-1994 resolves that FIG should support the establishment and adoption of international standards for land and geographic information systems and that FIG member associations should take initiatives for the development and adoption of corresponding national standards where this is not already undertaken.

3. Working Groups
3.1 Commission 3 will develop a work profile which does not overlap other international organisations dealing with LIS/GIS issues. The starting point will be LIS/GIS for land and resource management and the main topics will be LIS/GIS for developing countries; spatial infrastructure; legal and organisational issues related to GIS; and GIS and the future - the impact on surveyors.

3.2 Commission 3 has appointed a number of working groups. The results of their work will be reported to the XXI congress in Brighton.

3.3 LIS/GIS for Developing Countries - Information (joint group with Commission 7) 
Chairman: Dir Gen Sune Andersson (S)
Aim: to continue to issue and distribute a newsletter on LIS/GIS and cadastre for developing countries. Sweden will take over from the New Zealand Department of Survey and Land Information responsibility for maintaining, editing, printing and distributing the newsletter. Possibilities for its wider distribution and securing external aid for its funding will be investigated. In addition to a printed version, Prof. Harland Onsrud, University of Maine (USA), will make the newsletter available on Internet.

3.4 Implementation of LIS/GIS in Developing Countries: Lessons Learned
Chairman: Robin McLaren (UK)
Aims: (a) develop guidelines (or check lists) for the implementation of LIS/GIS in developing countries and (b) prepare a report about lessons learned in developing countries. The first version will be considered at either the 63rd PC meeting in Argentina or the 64th PC meeting in Singapore. The final report will be presented to a dedicated session at the XXI congress in Brighton.

3.5 Legal Framework for LIS/GIS
Chairman: Prof. Harland Onsrud (US)
Aim: to prepare a report on legal issues related to GIS (privacy, liability, copyright). The first version will be considered at a workshop in July 1996 in Bergen, Norway. The final report will be presented to a dedicated session at the XXI congress in Brighton.

3.6 GIS for Coastal Areas and Adjacent Seas (joint group with Commission 4)
Chairman: Dr Ing Delf Egge (D)
Aim: to study problems related to the establishment of GISs for coastal areas
and adjacent seas, requiring data for more than one country. The North Sea will be used as a case study. Draft findings will be considered at a workshop in July 1996 in Bergen, Norway. The final report will be presented to a dedicated session at the XXI congress in Brighton.

3.7 Spatial Data Infrastructure  
*Chairman: Dr David Coleman (Can.)*  
Aim: to identify, explore, discuss and summarise the issues of special interest to FIG associated with the planning, implementation, management and assessment of national and global spatial data infrastructure. To support the organisation and presentation of workshops and conference sessions related to the theme; to encourage the preparation of a series of papers; and to summarise and document lessons learned and issues identified at a dedicated session at the XXI congress in Brighton.

3.8 GIS and the Future (approved at the 62nd PC meeting)  
*Chairman: Jes Ryttersgaard (DK)*  
Aim: to monitor the general GIS/LIS sphere, to identify developments and innovative activities of special interest to FIG and to evaluate their impact on surveyors and surveying society. Information will be collected from a network of persons who have access to on-going developments concerning the issues falling within Commission 3's responsibilities. Initial findings will be considered at a seminar in Denmark in October 1996 and the final results reported at the XXI congress in Brighton.

3.9 FIG statement on GIS/LIS for Sustainable Development (approved at the 62nd PC meeting)  
*Chairman: Jes Ryttersgaard (DK)*  
Aim: Arising from Agenda 21 adopted by the Rio Earth Summit, and in close co-operation with WG 3.2, to prepare an FIG statement on GIS/LIS for sustainable development. The statement will summarise the main issues to be considered for the implementation and maintenance of GIS/LIS. A task force will prepare a framework statement for consideration at the 63rd PC meeting in Argentina. It will be developed at a seminar in Denmark in October 1996 and a full draft will be considered at the 64th PC meeting in Singapore. The final statement will be presented at the XXI congress in Brighton.

4. Events, Participation, Collaboration  
4.1 Commission 3 held its first meeting in Fredericton, Canada, in October 1994 and its second during the 62nd PC meeting in Berlin.

4.2 During the 63rd PC meeting in Argentina Commission 3 will hold an internal meeting and WG 3.5 will prepare a mini seminar on spatial infrastructure.

4.3 Two workshops will be arranged in conjunction with the Nordic surveyors congress in July 1996 in Bergen, Norway, on 1 July to progress WG 3.4's work on GIS for coastal areas and adjacent seas and on 4 July to progress WG 3.3's work on legal framework for GIS/LIS.
4.4 The commission will arrange two workshops in October 1996 in Denmark to progress WG 3.6’s work on GIS and the future and WG 3.7’s statement on GIS/LIS for sustainable development.

4.5 Commission 3 will arrange a half-day seminar during the 64th PC meeting in Singapore and investigate the possibility of arranging an immediately preceding or following one-two day seminar in the South Asian region.

5. Communication
Commission 3 will maintain a newsletter throughout the period. A major aim will be to secure a delegate to the commission from each FIG member association.

6. Officers and Contacts

Mr Helge Onsrud
Chairman, FIG Commission 3
Ministry of the Environment
P O Box 8013 Dep
N-0030 Oslo, NORWAY
Tel: +47 22 34 59 09
Fax: +47 22 34 27 59

Mr Jes Ryttersgaard
Vice-Chairman, Commission 3
National Survey and Cadastre
Bjerggade 6
DK-6200 Aabenraa, DENMARK
Tel: +45 74 62 37 55
Fax: +45 74 62 08 72
(also Chairman, FIG WG 3.6, FIG WG 3.7)

Dir Gen Sune Andersson
Chairman, FIG WG 3.1
Parkvågan 8
S-801 27 Gålve
SWEDEN

Mr Robin McLaren
Chairman, FIG WG 3.2
Know Edge Ltd
33 Lockharton Avenue
Edinburgh EH14 1AY, UK
Tel and fax: +44 131 443 1872

Prof. Harland J Onsrud
Chairman, FIG WG 3.3
NCGIA
342 Boardman Hall
University of Maine
Orono, Me.04469, USA

Mr David J Coleman
Chairman, FIG WG 3.5
Department of Geodesy and Geomatics
University of New Brunswick
P O Box 4400
Fredericton, NB E3B 5A3, CANADA

Dr Ing Delf Egge
Chairman, FIG WG 3.4
Polytechnic of Hamburg
Heberbrandstrasse 1
D-22297 Hamburg
GERMANY
COMMISSION 4 - HYDROGRAPHY
Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
Commission 4 will arrange technical sessions, including joint sessions with other commissions. The work plan, activities of the working groups and progress with resolutions will be reviewed, and new initiatives implemented as necessary.

2. Working Groups: XX Congress Resolutions
2.1 Resolution 4/1-1994
Working Group 420a. Chairman: Stephen DeLoach (US)
Technology exists to establish water levels and slopes over a survey area. A review has to be set up on methods for chart datum determination. Report to a dedicated session at the XXI congress in Brighton.

2.2 Resolution 4/2-1994
Working Group 420b. Chairman: Dr Ing Delf Egge (D)
To investigate, jointly with Commission 3, methods for combining hydrographic and land information in a GIS for coastal areas and waterways, using the North Sea as a model. Report to a dedicated session at the XXI congress in Brighton.

2.3 Resolution 4/3-1994
Working Group 420c. Chairman: Dennis A St Jacques (Can.)
To investigate what criteria should be used to determine the quantity of data to be retained and managed in multibeam sounding systems - for example, in relation to sea/ground structures. A report will be prepared for the commission workshop to be held in conjunction with the 64th PC meeting in Singapore.

2.4 Resolution 4/4-1994
Working Group 419a. Chairman: Prof. David Wells (Can.)
The working group reported to the XX congress in Melbourne that the terms of reference were completed for a study of systematic errors in multibeam sounding systems and methods of compensating for the errors. To be reported further to a dedicated session at the XXI congress in Brighton.

3. Other Working Groups
3.1 FIG/IHO Advisory Board on Standards of Competence for Hydrographic Surveyors
Chairman: Jerry Mills (US)

3.2 FIG/IHO Technical Assistance Co-ordination Committee (TACC)
Chairman: Giuseppe Angrisano, IHO (Monaco)
Vice-Chairman: Wilfried Schleider, FIG (D)

4. Events, Participation, Collaboration
Resolution 4/4-1994: Commission 4 will co-sponsor appropriate hydrographic conferences and arrange meetings. Meetings at which the commission has had or
will have a presence include

1995  informal meeting of TACC, 62nd PC meeting, Berlin
       Canadian Geomatics conference, Ottawa

1996  meeting of the Institution of Surveyors, Malaysia
       Hydro'96, Rotterdam

1997  64th PC meeting, Singapore
       IHO conference, Monaco

1998  XXI congress, Brighton
       Hydro'98.

5. Communication
Commission 4's administration will take advantage of every opportunity to
disseminate commission information to national delegates, member associations
and individual hydrographers through articles in the FIG Bulletin, national bulletins,
circular letters and symposia. The commission chairman will submit articles and
information to international hydrographic journals for possible publication. The
commission's administration will encourage all national delegates to participate in
Commission 4's deliberations.

6. Officers and Contacts
Dr Ing Wilfried Schleider
Chairman, FIG Commission 4
Federal Water & Shipping
Authority Northwest
Schlossplatz 9
D-26603 Aurich, GERMANY
Tel: +49 4941 60 24 80
Fax: +49 4941 60 23 78

Mr Dennis A St Jacques
Vice-Chairman, FIG Commission 4
Canadian Hydrographic Service
867 Lakeshore Drive, P O Box 5050
Burlington, Ontario L7R 4A6
CANADA
Tel: +1 905 336 4857
Fax: +1 905 336 8916
(and Chairman, FIG WG 420c)

Mr Adam J Greenland
Secretary, FIG Commission 4
Hydrographic Section, PLA
Royal Pier Road
Gravesend DA12 2BG, UK
Tel: +44 1474 562208
Fax: +44 1474 562314

Mr Stephen R DeLoach
Chairman, FIG WG 420a
US Army Topographic Engineering Center
7701 Telegraph Road
Alexandria, Va.22315, USA
Tel: +1 703 355 3026 ext.2475
Fax: + 1 703 355 3176

Dr Ing Delf Egge
Chairman, FIG WG 420b
Polytechnic of Hamburg
Heberbrandstrasse 1
D-22297 Hamburg, GERMANY
COMMISSION 5 - POSITIONING AND MEASUREMENT

Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998

1.1 Commission 5’s work will culminate in a series of invited papers and the organisation of panels in support of the technical programme for the XXI congress in Brighton. The papers and panel discussions will present the latest information about positioning technologies, including the use of terrestrial, marine, airborne and satellite-based sensors to acquire spatial and other data, while focusing on the practical aspects and problems faced by practitioners. The content of these sessions will be more general than specific, more related to practice than to theory and dealing also with economic and managerial aspects of new technologies and methods. Emphasis will be on practical experiences gained with new positioning and measurement techniques and methodologies to help practitioners meet the needs of society and applications related to sustainable development. Because the working groups deal with issues that are interdisciplinary in nature the technical, oral and poster sessions and panel discussions will include joint arrangements with other commissions.

1.2 Representatives of Commission 5 will assist in organising a special technical programme at the congress on behalf of IUSM and in co-operation with IUSM working groups.

1.3 In co-operation with FIG’s sponsors, representatives of vendors will be invited to participate in a special session to identify new developments and trends in instrumentation, methodologies and services.
2. Working Groups: XX Congress Resolutions

2.1 Resolution 5/1-1994: Quality Assurance. Quality Control and Standards
   Working Group 5.1. Chairman: Dr Vaclav Slaboch (Cz.)
   On behalf of FIG, the working group will co-operate with ISO in drafting international standards; serve as a source for experts on positioning and measurement technologies; and produce a summary of documents that are available around the world dealing with standards, specifications and recommended practices for positioning.

2.2 Resolution 5/2-1994: Reference Systems and Heighting
   Working Group 5.2. Chairman: Matt Higgins (Aus.) and Trevor Greening (US)
   The working group will prepare guidelines on datum transformations for global positioning system (GPS) users; prepare for publication a list of information sources relevant to the subjects of reference systems and datum transformations; and prepare information and guidelines on the GPS heighting and the application and accuracy of geoid models.

2.3 Resolution 5/3-1994: Satellite Positioning Systems
   Working Group 5.3. Chairman: Sally Froedge (US) and Maria Marsella (I)
   The working group will produce an interim report, for review by the 63rd PC meeting in Argentina, on issues pertinent to the effective use of GPS and differential GPS (DGPS) in FIG member countries, to include frequency issues, permanent reference station networks, fiducial networks for GPS and other associated issues, with a final report being presented to the XXI congress in Brighton.

2.4 Resolution 5/4-1994: Kinematic Positioning Methods
   Working Group 5.4. Dr Elizabeth Cannon (Can.) and Holger Schade (D)
   The working group will keep abreast of the state of the art in equipment and integrated systems, data collection procedures, processing methods and research developments; and will consider the numerous applications for positioning and orientation data in the activities of the other FIG commissions, with particular attention being given to the uses of integrated kinematic positioning systems in connection with the activities of Commissions 4 and 6.

2.5 Resolution 5/5-1994: Instrumentation and Data Access
   Working Group 5.5. Chairman: Prof. Michel Kasser (F)
   The working group will encourage manufacturers to provide information about the models, parameters and other aspects of the calculations performed on "raw data". It will also encourage manufacturers, national agencies and academic institutions to follow the guidelines presented in FIG publication no. 9 "Recommended procedures for routine checks of electro-optical distance meters".

2.6 The working group chairmen will identify and invite the participation of individuals who are involved in technical activities related to the missions and objectives of the working groups; co-operate with other national and international organisations in arranging symposia, workshops, seminars and conferences; and identify authors for papers on specific projects or
experiences for possible inclusion in the programme for the XXI congress in Brighton.

3. Other Working Groups
Commission 5 will co-operate with the working groups of other commissions, particularly Commissions 4 and 6, with regard to the use of terrestrial, marine, airborne and satellite-based sensors to acquire spatial and other data. When appropriate, it will recommend experts to serve on IUSM working groups involved in activities related to the responsibilities of Commission 5. Because the technical interests of Commission 5 are closely related to activities of colleagues from other international professional organisations such as IAG and ISPRS, national delegates and working group members will be encouraged to serve on and participate in the activities of their working groups where possible and appropriate.

4. Events, Participation, Collaboration
4.1 At each PC meeting and at the XXI congress Commission 5 will host a special meeting of manufacturers and practitioners to discuss issues of mutual concern. The chairmen of Commissions 4 and 6 will be invited to attend and participate in the discussions. The purpose and objectives of these meetings will be to
* promote interaction and stimulate ideas for goals in the activities of Commission 5
* encourage the exchange of views and concerns which affect the practical use of instrumentation and methodologies for positioning and determining spatial relationships
* explore concerns and matters related to quality control, quality assurance and data validation
* review privileges and obligations for FIG sponsors
* discuss matters related to planning and guidelines for congress exhibitions
* consider arrangements for one or more special sessions at the XXI congress to identify new developments and trends in instrumentation and services.

4.2 Commission 5 has been or will be a co-operating organisation for the following events
* “Mobile mapping” symposium, 24 - 26 May 1995, Ohio State University Center for Mapping and Department of Geodetic Science and Surveying, Columbus, Ohio, USA
* IUSM special session on “GPS trends in precise terrestrial airborne and spaceborne applications”, 2-3 July 1995, during the IUGG XX general assembly, Boulder, Colorado, USA
* ISPRS workshop on “Integrated sensor orientation - theory algorithms and systems”, 4-8 September, Barcelona, Spain (in conjunction with ICA95)
* one of the four symposia that form part of the programme of the 63rd PC meeting in Argentina
* international course in engineering geodesy, 9 - 14 September 1996, Technical University of Graz, Austria
* symposium or workshop on modern positioning and measurement technologies, late 1996 or early 1997, location to be announced
* other symposia, workshops and conferences that are open to international
delegates and when the host organisation requests the co-operation of Commission 5.

4.3 In conjunction with the annual PC meetings, commission officers and national delegates will meet to discuss technical and business matters of the commission and review the activities of the working groups and progress in meeting goals in the work plan. At the 64th PC meeting in Singapore all officers and working group chairmen will meet to review abstracts and prepare the technical programme for the XXI congress in Brighton. Coordination meetings will also be held with officers of Commissions 4 and 6.

5. Communication
5.1 An important objective will be to prepare articles and otherwise to disseminate information on Commission 5’s activities through the FIG Bulletin, member associations’ publications and circular letters. Whenever possible, information related to the interests, mission and activities of the commission will be disseminated by electronic mail. If practical, a forum may be organised for sharing information on the activities of the working groups and on the location and dates of meetings, conferences, workshops and symposia planned with the co-operation of Commission 5.

5.2 Commission 5 will facilitate professional advancement in developing countries by encouraging national delegates and members of working groups to exchange technical information and serve as a source for contacts who could make technical presentations at seminars and workshops held in developing countries.

5.3 Commission 5’s administration will assist the Bureau in identifying additional sponsors for FIG. During attendance at exhibitions they will attempt to meet vendor representatives, particularly from those companies who have exhibited at past FIG congresses, and to provide information about FIG, the responsibilities of Commission 5 and the benefits of becoming an FIG sponsor.

6. Papers and Publications
6.1 Commission 5 will prepare, for delivery at the XXI congress in Brighton and for distribution to member associations, a summary of documents that are available around the world dealing with standards, specifications and recommended practices for positioning (paragraph 2.1).

6.2 By the end of 1996 Commission 5 will prepare, for publication and distribution to member associations and satellite positioning users, guidelines on datum transformations; a list of information sources relevant to the subjects of reference systems and datum transformations; and information and guidelines on the GPS heighting and the application and accuracy of geoid models (paragraph 2.2).

6.3 Commission 5 will produce a report by the time of the XXI congress, for possible publication, on issues pertinent to the effective use and application of
the GPS and other satellite positioning systems. The document will include issues of mutual concern such as deployment and operation of permanent reference station networks; real-time DGPS systems; data formats and standards; and radio frequency interference that may affect satellite signal reception.

6.4 Commission 5 will promote the wide dissemination of FIG publication no. 9, recommending (where practical) its publication in member organisations' journals and distributing it to universities offering degree programmes in surveying science and geomatics engineering.

7. Officers and Contacts

Mr Larry D. Hothem
Chairman, FIG Commission 5
US Geological Survey
521 National Center,
Reston, Va. 22092, USA
Tel: +1 703 648 4663
Fax: +1 703 648 4270
e-mail: lhothem@usgs.gov

Mr Mark Bryant
Joint Secretary, FIG Commission 5
P O Box 2882
Springfield, Va. 22152
USA
Tel: +1 703 904 1030
Fax: +1 703 904 1040
e-mail: mbryant102@aol.com

Dr Vaclav Slaboch
Chairman, FIG WG 5.1
Czech Office for Surveying, Mapping and Cadastre
Hybernska 2
11121 Prague 1, CZECH REPUBLIC
Tel: +42 2 242 24811
Fax: +42 2 242 17383

Mr Matt Higgins
Co-Chairman, FIG WG 5.2
School of Geomatic Engineering
University of NSW
Sydney, NSW 2052, AUSTRALIA
Tel: +61 3 385 4147
Fax: +61 3 313 7493
e-mail: matt@wally.gas.unsw.edu.au

Mr Jean Marie Becker
Vice-Chairman, FIG Commission 5
Lantmäteriet
S-801 92 Gälve
SWEDEN
Tel: +46 26 153728
Fax: +46 26 610 676
e-mail: becker@lmv.lm.se

Mr Iain Greenway
Joint Secretary, FIG Commission 5
Ordnance Survey
Romsey Road
Southampton S016 4GU, UK
Tel: +44 1703 792 558
Fax: +44 1703 792 660
e-mail: dwilley@ordsvy.govt.uk

Prof. Michel Kasser
Chairman, FIG WG 5.5
Ecole Supérieure des Géomètres et Topographes
18 allée Jean-Rostand
F-91025 Evry Cedex
FRANCE
Tel: +33 1 60 77 97 40
Fax: +33 1 60 77 96 99

Mr W J Trevor Greening
Co-Chairman, FIG WG 5.2
Measurement Science Inc
61 Inverness Drive East
Englewood, Co. 80112, USA
Tel: +1 303 799 1989
Fax: +1 303 799 8842
e-mail: msi@euclid.com
COMMISSION 6 - ENGINEERING SURVEYS

Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
Commission 6 will arrange technical sessions, including joint sessions with other commissions, and poster sessions. Activities and progress will be reviewed and new initiatives implemented as necessary. Resolutions will be prepared and presented to the congress.

2. Working Groups: XX Congress Resolutions

2.1 Resolution 6/3-1994: High Precision Methodology for Large Scientific Equipment
   Working Group 6A. Chairman: Dr Michel Mayoud (F)
   The working group will
   * identify and invite involved specialists to participate in its work
   * collect and file in a database the title and keywords of all relevant technical papers, proceedings and reports
   * organise workshops on the subject
   * promote developments, instruments and methods which are applicable in this field.

2.2 Resolution 6/4-1994: Deformation Measurement
   Working group 6C. Chairman: Prof. Adam Chrzanowski (Can.)
   The working group will
   * organise or co-sponsor symposia or workshops to which other professionals will be invited
   * finalise the definition and classification of deformation modelling and analysis
organise an ad hoc committee to prepare guidelines for practising surveyors on the physical interpretation of deformations.

2.3 Resolution 6/5-1994: Information Systems in Engineering Surveys

* Working group 6D. Chairman: Prof. Dr Ing Lothar Gründig (D)
* The working group will
* invite interested scientists to join the working group
* organise a first meeting of the working group to discuss state of the art of information exchange in surveying engineering, novel strategies, necessary research work, actual projects and norms
* organise a two-day international workshop on the subject.

2.4 Resolution 6/6-1994: Linear Objects, Optimisation of Circulation Ways

* Working group 6B. Chairman: Dr Théophile Engel (CH)
* The working group will
* continue its working relationship with UIC
* explore the possibility of setting up a common working group with UIC.

2.5 Resolution 6/7-1994: Positioning System Standards

* Ad hoc committee 6.2. Chairman: Stephen DeLoach (US)
* The ad hoc committee will
* establish a working relationship with Commissions 4 and 5 on the application of positioning systems
* identify other organisations involved in developing standards and identify those of their activities that might benefit surveyors.

3. Other Working Groups

3.1 Ad hoc committee 6.1, special geodetic equipment for industrial and other engineering applications, will participate in the IUSM working group on automated control surveys.

3.2 Working group 6E, laser techniques, applications in engineering surveys, will complete the manuscript "Laser in engineering surveys".

4. Events, Participation, Collaboration

4.1 WG 6A will participate in the fourth international workshop on accelerator alignment in Japan in November 1995.

4.2 Working group 6C will co-sponsor the eighth international (FIG) symposium on 25-28 June 1996 in Hong Kong on deformation measurements.

4.3 Working group 6D will hold its first meeting in spring 1996 in Berlin. It will organise a two-day international workshop, possibly at the end of 1996.

4.4 The commission will co-sponsor the 12th international course in engineering geodesy on 9-14 September 1996 in Graz, Austria; the FIG symposium on surveys for the construction of large bridges and tunnels in 1997 in Denmark; and the joint Commission 5/6 symposium during the 64th PC meeting in Singapore.
5. Communication

5.1 Activity within Commission 6 will be co-ordinated through the chairman and the chairmen of the working groups and the ad hoc committees, assisted by the commission secretary. Interdisciplinary activities will be co-ordinated by the respective working groups or ad hoc committees, with necessary support being given by the commission chairman and secretary. Final responsibility for all activity within the commission rests with the chairman.

5.2 National delegate meetings will be organised during each PC meeting.

6. Papers and Publications

"Laser in engineering surveys" (paragraph 3.2).

7. Officers and Contacts

Prof. Chen Yongqi
Chairman, FIG Commission 6
Dept. of Land Surveying and Geo-Informatics
Hong Kong Polytechnic
Hung Hom, Kowloon, HONG KONG
Tel: +852 2766 5966
Fax: +852 2330 2994
e-mail: lsyqchen@hkpucc.polyu.edu.hk

Mr Conrad Tang
Secretary, FIG Commission 5
Dept. of Land Surveying and Geo-Informatics
Hong Kong Polytechnic
Hung Hom, Kowloon, HONG KONG
Tel: +852 2766 5963
Fax: +852 2330 2994
e-mail: lswtang@hkpucc.polyu.edu.hk

Dr Michel Mayoud
Chairman, FIG WG 6A
CERN
Head of Applied Geodesy Group
CH-1211 Geneva 23, SWITZERLAND
Tel: +41 22 767 3007
Fax: +41 22 767 3456

Prof. Adam Chrzanowski
Chairman, FIG WG 6C
Dept. of Geodesy & Geomatics
University of New Brunswick
Fredericton NB, CANADA E3B 5A3
Tel: +1 506 453 4698
Fax: +1 506 453 4943

Mr Stephen R DeLoach
Vice-Chairman, FIG Commission 6
US Army Topographic Engineering Center
7701 Telegraph Road
Alexandria, Va. 22315, USA
Tel: +1 703 355 3026 ext. 2475
Fax: +1 703 355 3176
e-mail: deloach@tec.army.mil
(and Chairman, FIG ad hoc committee 6.2)

Dr Théophile Engel
Chairman, FIG WG 6B
Chemins de Fer Fédéraux
Avenue de la Gare 45
CH-1001 Lausanne, SWITZERLAND
Tel: +41 21 342 2686
Fax: +41 21 342 2790

Prof. Dr Ing Lothar Gründig
Chairman, FIG WG 6D
Institut für Geodäsie und Photogrammetrie
TU Berlin, Strasse des 17 Juni 135
D-1000 Berlin 12, GERMANY
Tel: +49 30 314 22375
Fax: +49 30 314 21119
COMMISSION 7 - CADASTRE AND LAND MANAGEMENT
Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
Commission 7 will present the results of its current work plan at the XXI congress in Brighton in 1998. At the congress specific sessions will be conducted to present the findings of the commission's three working groups.

2. Working Groups: XX Congress Resolutions
2.1 Three new working groups were established. Each has prepared terms of reference and a work plan for the period 1994-98. The working groups continue their activities throughout the year, although the focus of the activities is Commission 7's annual meeting.

2.2 Working Group 7.1: Modern Cadastres
Chairman: Jurg Kaufmann (CH)
This working group will undertake a study of cadastral reform procedures as applied in developed countries. Particular attention will be given to automation of the cadastre and the role of the cadastre as part of a larger land information systems. The group will examine trends in this field and produce a vision of where cadastral systems will be in the next 20 years, the means by which these changes will be achieved, and the technology to be used in implementing these changes. The group has already organised a one-day symposium, "Modern cadastres and cadastral innovations" at Delft University of Technology as part of Commission 7's 1995 annual meeting. The proceedings have been published and widely circulated.

2.3 Working Group 7.2: Cadastral Systems in Developing Countries
Chairman: Tommy Österberg (S)
This group will examine and identify the requirements for appropriate cadastral systems in developing countries, with particular emphasis on issues concerned with the establishment and maintenance of cadastral systems,
appropriate technology and difficulties and/or appropriateness in establishing cadastral systems in traditional societies based on customary tenure.

2.4 Working Group 7.3: Land Management
Chairman: Dr Paul Munro-Faure (UK)
This group will study land management for optimal sustainable use in the 21st century and examine the land regulatory, economic and physical approaches and the future directions in these areas of land management. The group will also develop a theoretical framework for land management within which cadastral systems should operate.

3. Other Working Groups
The "Statement on the cadastre", prepared at the request of the FIG Bureau by a working group, chaired by Tommy Osterberg, was approved by the 62nd PC meeting. It has been published by the Bureau in English and widely distributed. Copies in other languages will be available at cost.

4. Events, Participation, Collaboration
4.1 Format of Commission 7 Annual Meetings
This reflects the activities of the three working groups, with time allocated for each to work on its own during the meeting and for each of the annual meetings to have as its focus a special one-day seminar related to one of the groups. The working groups will also conduct special sessions at the XXI congress in Brighton.

4.2 Commission 7 will conduct or co-sponsor at least the following events. Delegates from each developed country will take responsibility for funding someone from a developing country to attend the annual meetings.

4.3 63rd PC meeting, Argentina
Commission 7 will organise a symposium on cadastre and land management in conjunction with the 63rd PC meeting.

4.4 Commission 7 Annual Meeting, 1996, Hungary
Commission 7 will hold its annual meeting in June 1996 in Hungary, during the 4th annual GIS/LIS conference and in conjunction with a one-day seminar on land management under the direction of the chairman of working group 7.3. The seminar will particularly address land management issues in central and eastern Europe, as well as focusing on developments in Hungary. The Hungarian member association has been informed of the necessary requirements for the conduct of the meeting.

4.5 Commission 7 Annual Meeting, 1997, Malaysia
Commission 7 will hold its annual meeting in 1997 in Malaysia, immediately before or after the 64th PC meeting in Singapore, together with a seminar on appropriate cadastral systems for developing countries under the direction of the chairman of working group 7.2. The commission is exploring sponsorship possibilities for participants from a range of South East Asian and Pacific island countries who could not otherwise afford to attend the seminar. The
Malaysian member association has been informed of the necessary requirements for the conduct of the meeting, which will be organised by the Director General of Malaysia’s Department of Survey and Mapping.

4.6 XXI Congress, Brighton
Commission 7 will conduct specific sessions at the congress to present the findings of the three commission working groups.

4.7 1998 and Beyond
The New Zealand member association has offered to host a Commission 7 annual meeting after the XXI congress.

5. Communication
5.1 For management purposes Commission 7 has agreed that the chairman should be able to discuss with the vice-chairman and the chairmen of the three working groups, Dr Paul Munro-Faure, Jurg Kaufmann and Tommy Österberg, any issue affecting the commission which requires a quick decision to be made in cases where the necessary time to correspond with all commission delegates is not available.

5.2 Commission 7 Marketing Brochures
Commission 7 has produced brochures in English, French and German reflecting the terms of reference of the commission and its working groups and its activities. It has also produced a poster to promote its activities. Both have been and continue to be widely distributed.

5.3 Commission Database
Commission 7 continues actively to up-date its database of delegates and correspondents. It has adopted a policy whereby correspondents who do not attend two consecutive annual meetings of the commission are removed from the mailing list. However, delegates continue to receive all mailings, irrespective of whether or not they attend commission annual meetings, meetings of the Permanent Committee or the four-yearly congress.

5.4 Commission 7 WWW Home Page
Commission 7 has developed a home page on the world wide web to promote its activities. It is currently being maintained in the Department of Geomatics, University of Melbourne, and its Internet address is http://www.sli/unimelb.edu.au/fig7.

6. Papers and Publications
6.1 The reports of the working groups to be presented at the XXI congress, together with the proceedings from the three seminars organised in previous years by the working groups, will form the basis of an FIG publication which will represent Commission’s 7’s work for the period 1994-98.

6.2 Joint Commission 3 (LIS) and Commission 7 Newsletter
In 1994 the chairmen of Commissions 3 and 7 agreed to the production of a joint newsletter. The original Commission 3 newsletter was becoming
increasingly concerned with cadastral and parcel-based land information systems and Commission 7 therefore has a commitment to contribute to it to ensure its continuing success.

7. Officers and Contacts
Prof. lan Williamson  
Chairman, FIG Commission 7  
Department of Geomatics  
University of Melbourne  
Parkville, Vic.3052, AUSTRALIA  
Tel: +61 3 9344 4431  
Fax: +61 3 9347 4128  
e-mail: lan_Williamson@mac.unimelb.edu.au

Dr Paul Munro-Faure  
Vice-Chairman, FIG Commission 7  
Highcliffe, 20 Butt Street  
Michinghampton  
Stroud, Glos GL6 9JS, UK  
Tel & fax: +44 1453 882115  
(and Chairman, FIG WG 7.3)

Dr Gary Hunter  
Secretary, FIG Commission 7  
Department of Geomatics  
University of Melbourne  
Parkville, Vic.3052, AUSTRALIA  
Tel: +61 3 9344 4626  
Fax: +61 3 9347 2916  
e-mail: Gary_Hunter@mac.unimelb.edu.au

Mr Jurg Kauffmann  
Chairman, FIG WG 7.1  
im Hauffeld  
CH-8455 Rudlingen  
SWITZERLAND  
Tel & fax: +41 1 867 3489

Mr Tommy Österberg  
Chairman, FIG WG 7.2  
Chief Advisor, Interforest  
Jaako Poyry Consulting AB  
123 Lo Duc, Hanoi, VIETNAM  
Tel: +84 4 211987  
Fax: +84 4 211798

COMMISSION 8 - SPATIAL PLANNING AND DEVELOPMENT
Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
1.1 Commission 8 will present the results of its work and that of its working groups at the XXI congress in Brighton. These results, together with the outcomes of seminars and workshops organised during the preceding four years, will determine future commission activity.

1.2 At the XXI congress the commission will arrange a series of technical sessions, including joint sessions with other commissions - particularly Commissions 2, 3, 7 and 9. Commission 8's work plan, the activities of its working groups and progress with resolutions will be reviewed and up-dated and new initiatives will be implemented as necessary. New resolutions will be prepared for adoption by the General Assembly.
2. Working Groups: XX Congress Resolutions

2.1 The XX congress approved four resolutions governing the work of Commission 8 in 1994-98. They focus on (i) planning and the environment; (ii) developing human settlements and economic areas; (iii) managing and implementing the planning and development process; and (iv) countries in economic transition.

2.2 These resolutions are being progressed by two working groups whose deliberations are open to all interested national delegates.

2.3 Urban Regeneration

Commission 8 established a working group on urban regeneration in 1992 in Copenhagen to investigate practical solutions to inner city problems and the regeneration of established urban areas in industrial economies. The chairman, Paul Lohmann (NL), with help from commission vice-chairman Helmut Brackmann (D) and the UK delegate, Peter Dixon, presented his preliminary report at the XX congress. A final report and recommendations will be presented to the XXI congress in Brighton. In addition, to investigate and report on the responsiveness of spatial planning in a changing world context, the working group will undertake three or four case studies of different parts of the world, to assess the implementation of planning proposals on a continuing basis. The commission vice-chairman is responsible for organising this project.

2.4 Surveyors and EIA

Commission 8 established a new working group in 1994 in Melbourne to investigate ways of improving the competence of surveyors to undertake environmental impact assessments (EIA) and to develop EIA in the preparation of spatial planning projects and documents. The working group will also examine methods for promoting the incorporation of sustainable development in spatial planning. The commission chairman is preparing and circulating to all member associations a questionnaire on this subject. The results will be reported during the commission symposium to be held in conjunction with the 63rd PC meeting in Argentina and a final report will be made to the XXI congress in Brighton.

3. Events, Participation, Collaboration

3.1 Commission 8 will concentrate its activities in four main areas

- a series of seminars will be organised in countries in economic transition to help them develop spatial planning and environmental systems
- Commission 8 will co-operate with other FIG commissions and other non-governmental organisations (NGOs) in co-sponsoring seminars and symposia in developing countries
- a series of seminars will be organised by the working group on urban regeneration
- in all commission events the focus will be on sustainable development, EIA at different levels of planning, and spatial planning and implementation.
3.2 Commission 8 is organising more seminars and workshops than in previous years. All the papers presented at these events will be included in published proceedings.

3.3 Together with the Hungarian Society of Surveying, Mapping and Remote Sensing, Commission 8 organised a workshop in September 1994 in Budapest on "Spatial planning and development in eastern Europe - the change to the market economy".

3.4 63rd PC meeting, Argentina
Commission 8 will hold its annual meeting and will arrange a special seminar in co-operation with Commission 9 and the Federacion Argentina de Agrimensores.

3.5 HABITAT II, 3 - 14 June, Istanbul, Turkey
Commission 8, in co-operation with the FIG Bureau, is looking into the possibility of participating in the second UN conference on human settlements (HABITAT II).

3.6 Seminar, 18 - 21 September, Helsinki, Finland and Tallinn, Estonia
Commission 8 will arrange a combined seminar on "Changes in urban structures in the European Union and countries in economic transition". The part in Helsinki will concentrate on changes in urban structures and land use strategies in Europe. The part in Tallinn will look at problems in countries in economic transition and will continue the work undertaken at the seminars held in Budapest and during the 62nd PC meeting in Berlin.

3.7 64th PC meeting, Singapore
Commission 8 will hold its annual meeting and will arrange a special seminar on spatial planning in East Asia.

3.8 Conference of Southern African Surveyors, July 1997, Durban, South Africa
The commission hopes to participate in this conference, along with other FIG commissions, and perhaps to organise a special seminar on problems of informal settlements to take forward work done during the joint FIG/CASLE seminar held in August 1995 in Harare, Zimbabwe.

3.9 Seminar, autumn 1997, Netherlands and Germany
The working group on urban regeneration will arrange this seminar, on urban regeneration and inner city problems, as part of its on-going series of meetings.

4. Communication
4.1 Commission 8 has established a newsletter which is circulated two or three times a year to the commission administration, commission delegates, and other surveyors interested in Commission 8 activities, to improve the exchange of information between them. The newsletter can also be used by delegates to spread information about commission activities to members of their national associations. It contains news from the commission
administration, reports on seminars and other events, and reports from national delegates and working groups.

4.2 Commission 8 is also keen to publish short descriptions of interesting projects covering different fields of spatial planning and development.

4.3 Seven new countries have joined in the work of Commission 8 since the XX congress. So far 36 countries have appointed delegates to the commission.

5. Papers and Publications
Commission 8 will publish the proceedings of all the seminars and workshops it organises. It has already published the proceedings of the seminar held in September 1994 on "Spatial planning and development in eastern Europe - the change to the market economy".

6. Officers and Contacts
Mr Markku Villikka
Chairman, FIG Commission 8
Municipality of Hollola
P O Box 66
SF-15871 Hollola, FINLAND
Tel: +358 18 880 1359
Fax: +358 18 880 1442
e-mail: markku.villikka@hollola.elisa.fi

Dipl Ing Helmut Brackmann
Vice-Chairman, FIG Commission 8
Rotebuschstr.65
D-4200 Oberhausen 12
GERMANY
Tel: +49 201 882 3000
Fax: +49 201 882 3003

Mr Tapio Toropainen
Secretary, FIG Commission 8
Plancenter Ltd
Opastinsilta 6
SF-00520 Helsinki
FINLAND
Tel: +358 0 156 4336
Fax: +358 0 145 150

Mr Paul Lohmann
Chairman, FIG WG 8 (Urban Regeneration)
Seinpost Adviesbureau BV
Seinpostdvin 25
2586 EG S'Gravenhage
The Hague, NETHERLANDS
Tel: +31 70 354 8154
Fax: +31 70 358 4113

COMMISSION 9 - VALUATION AND THE MANAGEMENT OF REAL ESTATE
Work Plan 1994 - 98

1. XXI Congress, Brighton, 1998
1.1 Commission 9 will organise a programme of technical sessions, some jointly with other commissions, across the range of surveying activities which fall within the commission's responsibilities, including that of construction economics.

1.2 Commission 9 will arrange meetings in order, inter alia, to review this plan of work and formulate resolutions for the next four years, to be put to the General Assembly for approval.
2. Working Groups: XX Congress Resolutions

2.1 Working group 901 has been established, under the chairmanship of David de Kretser (UK), to further the work of FIG in respect of surveyors practising in the planning, measurement and management of construction works, including the estimation of costs. The establishment of this group is in compliance with resolution 9/4-1994.

2.2 Working group 902 has been established under the chairmanship of Prof. Kari Leväinen (SF) to consider educational and training matters (other than in connection with the impact of environmental considerations on the valuation and management of real estate, which is the responsibility of WG 903 below). In particular, working group 902 will advise upon the implementation of resolution 9/1-1994 which is concerned with the dissemination of syllabus guidelines pertaining to the valuation and management of real estate and the compilation of a select bibliography of available literature in this field.

2.3 Working group 903 has been established under the chairmanship of Mike Yovino-Young (US), the commission vice-chairman, to examine the impact of environmental issues on the valuation and management of real estate. In particular it will

* identify the educational needs of practitioners in this respect and develop a strategy to assist in meeting these needs, in furtherance of resolution 9/3-1994 and
* assist the commission in responding to the exhortation regarding environmental issues contained in the FIG statement on environmental issues (FIG publication no. 3 (1991), page 8).

2.4 The commission administration will be responsible for taking action to implement resolution 9/2-1994 concerning the organising of symposia and training courses and the publication of papers given at symposia, as appropriate.

3. Other Working Groups

3.1 Working group 904 has been established under the chairmanship of John Charman (UK), the commission secretary, to examine and report upon the existence of national professional associations concerned with valuation and the management of real estate (other than current FIG member associations) and to assist the commission to foster links with suitable national and international bodies.

3.2 Working group 905 has been established under the chairmanship of the commission chairman to further the work of the commission in relation to the management of real estate and, in particular, to consider the implementation of the FIG policy statement on the surveyor’s contribution to land management (FIG publication no. 4 (1991)).

4. Events, Participation, Collaboration

4.1 Commission 9 met during the 62nd PC meeting and will hold further meetings during the 63rd and 64th PC meetings to receive reports of the working groups.
and to discuss commission matters. It will also be involved with symposia held (some jointly with other commissions) during PC meetings.

4.2 Further Commission 9 symposia will be organised, with consideration being given to countries with pressing needs for education and training in valuation and the management of real estate.

4.3 Commission 9 will collaborate with other bodies. It has already participated in the joint FIG/CASLE seminar held in August 1995 in Harare, Zimbabwe.

5. Communication
Commission 9 will aim to improve communications and to involve more people in its work by circulating a biannual newsletter to commission delegates and others concerned with the work of the commission.

6. Papers and Publications
6.1 Commission 9 will organise the publication of appropriate papers given at symposia in order to widen their dissemination (in furtherance of resolution 9/2-1994).

6.2 Commission 9 will disseminate the syllabus guidelines and the select bibliography (when compiled), in accordance with resolution 9/1-1994.

7. Officers and Contacts
Prof. Brian Waldy
Chairman, FIG Commission 9
8 Queens Court, Earls Court Square
London SW5 9DA, UK
Tel: +44 171 477 8206
Fax: +44 171 477 8573
e-mail: e.b.d.waldry@city.ac.uk

Mr G M Yovino Young
Vice-Chairman, FIG Commission 9
2716 Telegraph Avenue
Berkeley, Ca.947095, USA
Tel: +1 510 548 1210
Fax: +1 510 548 3110

Mr John Charman
Secretary, FIG Commission 9
23 Millbank Court, John Islip Street
London SW1P 4LG, UK
Tel & fax: +44 171 630 6607

Mr David de Kretser
Chairman, FIG WG 901
The Old Forge
106 The Street
Puttenham
Surrey GU3 1AU, UK
Tel & fax: +44 1483 810239

Prof. Kari I Leväinen
Chairman, FIG WG 902
Helsinki University of Technology
Department of Surveying
Otakaari 1
SF-02150 Espoo, FINLAND
Tel: +358 0 451 3882
Fax: +358 0 827 3798