

FIG WORKING WEEK
Athens, Greece
May 22-27, 2004

TECHNICAL PROGRAMME

Sunday, May 23, 2004
17:00-18:30

Opening Ceremony

Venue: Ballroom III

Chair: **George Papavassiliou**, Chair of the Organising Committee of FIG 2004

Welcome Greetings

George Papavassiliou, Chair of Local Organizing Committee (LOC)

Yannis Alavanos, President of Technical Chamber of Greece (TCG)

Polychronis Akritidis, President of Hellenic Association of Rural and Surveying Engineers (HARSE)

Prof. **Gerhard Beutler**, President of the International Association of Geodesy (IAG)

Prof. **Milan Konecny**, President of the International Cartographic Association (ICA)

Keynote presentations

Invited keynote speaker: Mr. **Stavros Benos**, Surveying Engineer, Member of the Hellenic Parliament, former Minister of Culture

Mr. **Themistoklis Xanthopoulos**, Deputy Minister of Environment, Physical Planning and Public Works

Prof. Dr.-Ing. **Holger Magel**, President of FIG: Breathing the Olympic Spirit - The Mission of FIG in the 21st Century

Opening of the Working Week & Technical Conference

Monday, May 24, 2004
09:00-10:30

PS1 Plenary Session 1 – Geodesy and Space Technology

Venue: Aphrodite

Chair: **T. N. Wong**, Vice President of FIG

Rapporteur: **Matt Higgins**, Chair of FIG Commission 5

PS1.1 Prof. Dr.-Ing. **Gerhard Beutler**, President of IAG: Revolution in Geodesy and Surveying

PS1.2 Ms. **Takemi Chiku**, Chief, Committee Services and Research, United Nations Office for Outer Space Affairs (UN OOSA): The United Nations Office for Outer Space Affairs - Building Capacity of Developing Countries in Using Space Technology for Sustainable Development

Monday, May 24, 2004

11:00-12:30

TS1 Good Practices in Land Administration and Cadastre

Venue: Omega

Commission: 7

Chair: **Paul van der Molen** (Netherlands)

Rapporteur: **Christiaan Lemmen** (Netherlands)

Introduction papers

TS1.1 **Jürg Kaufmann** and **Daniel Steudler** (Switzerland): Cadastre 2014 – Review of Status in 2004

TS1.2 **Daniel Steudler** (Switzerland), **Ian P. Williamson** and **Abbas Rajabifard** (Australia) and **Stig Enemark** (Denmark): The Cadastral Template Project

Case studies

TS1.3 **Nabil Bounajma** (Morocco): Moroccan Cadastre: Unique Experience

TS1.4 **Jørgen Skrubbeltrang** (Denmark): Danish Multipurpose Cadastre – Experiences so far

TS1.5 **Francis Gabele** and **Marc Vanderschueren** (Belgium): A Better Knowledge for the Partners of the Belgian Cadastre

TS1.6 **Joseph Forrai**, **Sarit Murkes**, **Larisa Voznesensky** and **Michael Klebanov** (Israel): Development of a Better Cadastral Practice at the Survey of Israel

TS1.7 **Ivan Pesl** (†), **Jiri Rydval** and **Vaclav Slaboch** (Czech Republic): Free Internet Access to Cadastral Data – First Experience in the Czech Republic

TS2 NSDI's Development

Venue: VIP

Commission: 3

Chair: **Robin McLaren** (United Kingdom)

Rapporteur: **Yerach Doytcher** (Israel)

Introduction papers

TS2.1 **Rudolf W. Matindas**, **Puntodewo** and **Bebas Purnawan** (Indonesia): Development of National Spatial Data Infrastructure in Indonesia

TS2.2 **Frank Gielsdorf**, **Lothar Gründig**, and **Bernd Aschoff** (Germany): Positional Accuracy Improvement – A Necessary Tool for Updating and Integration of GIS Data

TS2.3 Stipica Pavičić, Mladen Rapaić and Slavko Lemajić (Croatia): Topographic Data Production as Basis for NSDI – Croatian Example

Case studies

TS2.4 Giuseppe Rando (Italy): Introduction of Automatic Procedures in the System of the Mutual Recognition of Professional Qualifications

TS2.5 Peter C. Nwilo and Dennis A. Osanwuta (Nigeria): National Spatial Data Infrastructure for Nigeria: Issues to Be Considered. This paper has not been presented in the conference.

TS2.6 Ranjan Mallick (India): Development of Spatial and Attribute Database for Planning and Managing Rural Service Centers, in Kendrapara District, Orissa, India: A GIS Based Information. This paper has not been presented in the conference.

TS3 Standards, Quality Assurance and Calibration

Venue: Lamda

Commission: 5

Chair: **Rudolf Staiger** (Germany)

Rapporteur: **Rob Sarib** (Australia)

Introduction papers

TS3.1 Iain Greenway (Ireland): Standards and Surveyors – A Continuing Odyssey

TS3.2 Elmar Lenz (Germany): Networked Transport of RTCM via Internet Protocol (NTRIP) – Application and Benefit in Modern Surveying Systems

Case studies

TS3.3 Theodora Marinoy, John Boretos, Stella Pytharouli and Stathis Stiros (Greece): Quality Control of Sidewalk Pavements Based on Total Station Surveys

TS3.4 Evangelia Lambrou and George Pantazis (Greece): Accurate Orientation of the Gyroscope's Calibration System

TS3.5 Mikko Takalo and Paavo Rouhiainen (Finland): Longer than 100 m Sightings with the Zeiss DiNi12 Digital Level

TS3.6 Ľubomír Ondriš, Štefan Lukáč, Viktor Rusina, Ján Buzási and Dušan Krušinský (Slovak Republic): The Optoelectronic Systems for Vertical Deformations and Tilt Measurement of Objects and Technological Equipment

TS4 Profession – In the Past and Future

Venue: Theta/Sigma

Commission: 1

Chair: **Volkmar Teetzmann** (Germany)

Rapporteur: **Michael Keller** (Switzerland)

TS4.1 **Joseph Forrai, Gili Kirschner, Michael Klebanov and Rozet Shaked** (Israel):
Classification of Licensed Surveyors

TS4.2 **Francis Gabele and Marc Vanderschueren** (Belgium): The Private Surveyor –
Privileged Partner of the Belgian Cadastre

TS4.3 **Steponas Deveikis, Jurga Naimavičienė and Inga Sodaitytė** (Lithuania): Cultural
Heritage Inventory in Lithuania – Role of the Surveyor's

TS4.4 **W. P. (Paddy) Prendergast** (Ireland): Ireland's Surveying Infrastructure for the 21st
Century

TS4.5 **Paul Watson, Richard Davis and Neil Hanney** (United Kingdom): Professional
Development and Team Integration

Workshop – Network on Underrepresented Groups in Surveying

Venue: Delta

Commission: Commission 1 WG 1.5

Chair: **Gabriele Dasse** (Germany)

Rapporteur: **Boo Lilje** (Sweden)

WSUG1.1. **Eleni Tziortzioti and Anna Karagiannaki** (Greece): The Women in Greece
Working and Developing the Surveying Profession

WSUG1.2. **Gabriele Dasse** (Germany): Gender Mainstreaming – A Topic for the Surveying
Profession

WSUG1.3. **Ali Buxton, Pat Turrell and Sara Wilkinson** (United Kingdom): Why Do Women
Like Working in Building Conservation?

Monday, May 24, 2004

14:00-15:30

TS5 Development of Good Land Administration Organisations I

Venue: Omega

Commission: 7

Chair: **András Osskó** (Hungary)

Rapporteur: **Winfried Hawerk** (Germany)

Introduction papers

TS5.1 **Leonie Newnham** (Australia): Managing Change Successfully in Land Management
Organisations

TS5.2 **Jerry Johnson** (The Netherlands): Delivering Multi-Purpose Cadastre Based on FIG Cadastre 2014

Case studies

TS5.3 **Murat Meha, Hyzri Llabjani and Hajzer Bublaku** (Kosovo): Development of Cadastre and Land Management in Kosovo

TS5.4 **András Osskó** (Hungary): Results of Central European Land Knowledge Center (CELK) Activities

TS5.5 **Paul van der Molen** (The Netherlands): Some Micro Economic Aspects of Land Ownership

TS5.6 **David Mitchell, Ron Grenfell and Keith C. Bell** (Australia): Investigating the Benefits of Land Administration Information to Natural Resource Management

TS5.7 **Edward E. Duncan and Peter E. Baffoe** (Ghana): Current Status of Geographic Information Systems (GIS) in Mining Organisations in Ghana. This paper has not been presented in the conference.

TS6 NSDI and Data Distribution

Venue: VIP

Commission: 3

Chair: **Robert W. Foster** (USA)

Rapporteur: **Chryssy Potsiou** (Greece)

TS6.1 **Paul Kelly** (Australia): A Modern Odyssey in Search of Relevance

TS6.2 **Mario Alberto Reyes Ibarra** (Mexico): The Mexican Spatial Data Infrastructure (IDEMEX) – A Tool for Development

TS6.3 **Panayiotis Andrea Panayiotou** (Cyprus): Electronic Governance for the Lands and Surveys Department in Cyprus. This paper has not been presented in the conference.

TS6.4 **Ayse Yavuz and Cemal Biyik** (Turkey): Public–Private Partnership in Cadastre: The Case of Turkey and the EU Countries

TS6.5 **Alon Lichtenstein and Yerach Doytsher** (Israel): Geospatial Aspects in Merging DTM with Breaklines

TS7 Reference Frame in Practice

Venue : Lamda

Commission: 5

Chair: **Michel Kasser** (France)

Rapporteur: **Georgia Fotopoulos** (Canada)

Introduction papers

TS7.1 **Mikael Lilje** (Sweden): Changing the Geodetic Infrastructure

TS7.2 **Christiana Mitsakaki** (Greece): Coordinate Transformations

Case studies

TS7.3 **Bihter Erol** and **Rahmi Nurhan Çelik** (Turkey): Precise Local Geoid Determination to Make GPS Technique More Effective in Practical Applications of Geodesy

TS7.4 **Antonio Hernandez Navarro** (Mexico): The Submetric Geoid of Mexico

TS7.5 **Jan Kostelecky** and **Jan Pytel** (Czech Republic): Modern Geodetic Control in the Czech Republic Based on the Densification of EUREF Network

TS7.6 **Otakar Švábenský** and **Josef Weigel** (Czech Republic): Optimized Technology for GPS Height Determination

TS7.7 **A.V. Gorbov**, **N. A. Gusev** and **N. L. Makarenko** (Russian Federation): Some Experience in Gravity Time Variation Studies

TS7.8 **Octavian Roman** (Romania): Ways of Determining the Orthometric Heights Using GPS Technology. This paper has not been presented in the conference.

TS8 Bridge for the Next Generation

Venue: Theta/Sigma

Commission: 1 and 2

Chair: **Klaus Rürup** (Germany)

Rapporteur: **Esben Munk Sørensen** (Denmark)

TS8.1 **G. K. (Ken) Allred** and **Lyall Pratt** (Canada): Practice Review – The Professional Coach

TS8.2 **Linnéa Lindqvist** and **Jennie Nilsson** (Sweden): How to Get More Students Involved in FIG

TS8.3 **Lina Björk** and **Sofia Iderheim** (Sweden): Teaching Based on Projects

TS8.4 **Esben Munk Sørensen** (Denmark): New Technology in Learning Environment for Surveyors

Workshop – History of Surveying and Measurement

WSHS1 – History of Surveying and Measurement

Venue: Delta

Commission: International Institution for the History of Surveying and Measurement

Chair: **Jan de Graeve**, Belgium

Rapporteur: **James Smith**, United Kingdom

WSHS1.1 **Dieter Lelgemann** (Germany): On the Ancient Determination of the Meridian Length by Eratosthenes of Kyrene

WSHS1.2 **Jan De Graeve** (Belgium): Update of the Struve Arc Preservation and Monumentation Inscription on the World Heritage List

WSHS1.3 **James Smith** (United Kingdom): The Struve Geodetic Arc and Its Possible Connections to the Arc of the 30th Meridian in Africa

Monday, May 24, 2004

16:00-17:30

TS9 Development of Good Land Administration Organisations II

Venue: Omega

Commission: 7

Chair: **Winfried Hawerk** (Germany)

Rapporteur: **András Osskó** (Hungary)

Introduction papers

TS9.1 **Arvo Kokkonen** (Finland): The Development Strategy for Cadastre and Land Register in Finland

TS9.2 **John Badekas** (Greece): Lessons Learned from a Big Cadastral Project

Case studies

TS9.3 **Panos Lolonis** (Greece): Estimation of the Number of Rights on Properties at the Community, Regional and National Levels in Greece and Their Use in Planning and Decision-making for the Development of the Hellenic Cadastre

TS9.4 **Osman Demir, Bayram Uzun and Ayse Yavuz** (Turkey): A General Approach for Cost Recovery of the Cadastral Products in Turkey. This paper has not been presented in the conference.

TS9.5 **Marina Vaskovich** (Belarus): Simplification of Land Tenure in Belarus – Way to Good Land Administration

TS9.6 **Ioan Stangu, Maria Contoman, Alexandrina Zaharia, Octavian Roman, Mugurel Enache and Mariana Ravdan** (Romania): Cadastre - Lasting Development and Environment Protection. This paper has not been presented in the conference.

TS10 Geoinformation for the Public

Venue: VIP

Commission: 3

Chair: **Paul Kelly** (Australia)

Rapporteur: **Bela Markus** (Hungary)

TS10.1 **Winnie Shiu** (Hong Kong SAR, China): Internet Maps for the Community in Hong Kong

TS10.2 **Thorben Hansen** and **Jens Holl nder** (Denmark): “The Map Supply” – A New Way of Providing a National Geodata Infrastructure

TS10.3 **Reinfried Mansberger** and **Gerhard Muggenhuber** (Austria): Geo-Data Infrastructure for Land Management in Austria

TS10.4 **Teresa Laranjeira** and **Vanda Franca** (Portugal): Digital Library of Portuguese Urban Cartography: An Example of a Public Information System

TS10.5 **El Hassane Semlali**, **Moha El Ayachi** and **Imadeddine Bazzi** (Morocco): A Geospatial Website for Consulting Geographical Information in Casablanca City

TS10.6 **Shattri Mansor**, **Mohammed Abu Shariah**, **Lawal Billa**, **Iwan Setiawan** and **Fisal Jabar** (Malaysia): Spatial Technology for Risk Management. This paper has not been presented in the conference.

TS11 Positioning and Measurement Technologies and Practices I – GNSS Networks

Venue: Lamda

Commission: 5

Chair: **Matt Higgins** (Australia)

Rapporteur: **Mikael Lilje** (Sweden)

Introduction papers

TS11.1 **Georgi Milev** (Bulgaria), **Gerd Rosenthal** (Germany) and **Keranka Vassileva** (Bulgaria): European Position Determination System (EUPOS)

TS11.2 **Antonio Hern andez Navarro** (Mexico): 12 Years of the Mexican National Active Geodetic Network

TS11.3 **Gershon Steinberg** and **Gilad Even-Tzur** (Israel): A State of the Art National Grid Based on the Permanent GPS Stations of Israel

Case studies

TS11.4 **Pasi H kkl ** (Finland): Practical Test on Accuracy and Usability of Virtual Reference Station Method in Finland

TS11.5 **Colin Bray** and **Iain Greenway** (Ireland): The OSi National Network RTK Solution

TS11.6 **Yalex Guerra Castellini** and **Pedro Luis García Pérez** (Cuba): Actual Stage of Geodesic and Hydrographic Activities of the Cuban Republic

TS11.7 **Dumitru Ghițău** (Romania): National GPS Network of Romania. This paper has not been presented in the conference.

TS12 Housing – Costs and Finance

Venue: Theta/Sigma

Commission: 10 and 9

Chair: **Andrew Morley**, United Kingdom

TS12.1 **Ari Hiltunen** (Finland): Subject: On the Price Formation of Single-Family House Properties – An Analysis of Comparable Sales Prices for Single-Family Houses in Some Regional Areas in Finland

TS12.2 **Wafula Nabutola** (Kenya): Affordable Housing – Some Experiences from Kenya

TS12.3 **Andrew W Morley** (United Kingdom): Development and Continuous Improvement of Construction Procurement Using Private Finance

TS12.4 **Tom Kibblewhite** and **Sara Wilkinson** (United Kingdom): Building Surveying: A UK Phenomenon or a Profession with Genuine Global Appeal?

TS12.5 **Diane Dumashie** (United Kingdom): Informal Housing in East Africa: Lessons Learned from Cross Country Borders (Part II)

TS12.6 **Yaacoub Saade** (Lebanon): Economy of Construction – Factors of Influence in Managing a Project

Workshop – History of Surveying and Measurement

WSHS2 – History of Surveying and Measurement

Venue: Delta

Commission: International Institution for the History of Surveying and Measurement

Chair: **Jan de Graeve**, Belgium

Rapporteur: **James Smith**, United Kingdom

WSHS2.1 **Dieter Lelgemann** (Germany): Recovery of the Ancient System of Foot/Cubic/Stadion – Length Units

WSHS2.2 **John F. Brock** (Australia): Pyramids to Pythagoras: Surveying from Egypt to Greece - 3000 B.C. to 100 A.D.

Tuesday, May 25, 2004

09:00-10:30

PS2 – Plenary Session 2 – Risk and Disaster Prevention and Management

Venue: Aphrodite

Chair: Dr.-Ing. **Andreas Drees**, Vice President of FIG

Rapporteur: **Gerhard Muggenhuber**, Chair of FIG Commission 3

PS2.1 Prof. **Stig Enemark**, Aalborg University (Denmark): Integrated Land and Environmental Management - A Conceptual Approach

PS2.2 Prof. Dr.-Ing. **Theo Kötter**, University of Bonn (Germany): Risks and Opportunities of Urbanisation and Megacities

Tuesday, May 25, 2004

11:00-12:30

TS13 Appropriate Technologies for Good Land Administration I

Venue: Omega

Commission: 7, 3 and 5

Chair: **Daniel Steudler** (Switzerland)

Rapporteur: **Arvo Kokkonen** (Finland)

Introduction papers

TS13.1 **Dan Schnurr** (United Kingdom): Review of Existing Cost Effective Surveying Technologies and Techniques for Developing Countries

TS13.2 **Chryssy Potsiou** (Greece) and **Peter Woodsford** (United Kingdom): Challenges of Providing Spatial Data to Developing Countries

Case studies

TS13.3 **Martti Pietikäinen** (Finland): From Control Points to VRS – The Development of Using GPS in National Land Survey of Finland

TS13.4 **Apostolos Arvanitis** and **Eleni Hamilou** (Greece): Modelling Cadastral Transactions in Greece Using UML

TS13.5 **George C. Green**, **Robert W. Snow** (USA) and **Tomas Blaha** (France): Low-Cost GPS Survey System Speeds Survey Work in Developing Countries

TS13.6 **Piero Panunzi** and **Fiorenzo Guaralda** (Italy): New Surveying Methodologies for the Cartographical Updating of Cadastral Maps and Archives

TS13.7 **Mugurel Enache** (Romania): The Stage of Geoinformatic Involvement in Cadastral Data Management in Romania – Present and Future Tendencies. This paper has not been presented in the conference.

TS14 Spatial Planning for Sustainable Development – Policies and Tools

Venue: VIP

Commission: 8

Chair: **Theo Kötter** (Germany)

Rapporteur: **Spike Boydell** (Fiji)

TS14.1 **David Mitchell, Michael Buxton and Trevor Budge** (Australia): Assessing the Role of Land Use Planning in Natural Resource Management

TS14.2 **Efstratios Doukakis** (Greece): The Dilemma of the Illegibility of State Vision: The Greek Coastal Legislation

TS14.3 **Rainer Müller-Jökel** (Germany): Land Readjustment – A Win-Win-Strategy for Sustainable Urban Development

TS14.4 **Adrianna Pulecka** (Poland): Landscape Planning – A Contribution to the Rural Land Development

TS15 Curricula Models

Venue : Lamda

Commission: 2

Chair: **Bela Markus** (Hungary)

Rapporteur: **Pedro Caverro** (Spain)

TS15.1 **Boo G Lilje** (Sweden): Survey Education at Lund Technical Institute – A Success!

TS15.2 **Kauko Viitanen** (Finland): Education of Valuers in FIG – What has been Achieved and how the Work will be Continued

TS15.3 **Edward E. Duncan** (Ghana): Geomatics Education in Ghana. This paper has not been presented in the conference.

Workshop - Hydro

WSH1 – Hydrography and Charting

Venue: Theta/Sigma

Chair: **Andrew Leyzack** (Canada)

Rapporteur: **Adam Greenland** (United Kingdom)

WSH1.1 **Alexandros Maratos** (IHB, Greece): Current Activities of the IHO

WSH1.2 **Svante Astermo** (Sweden): FIG/IHO/ICA Advisory Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers

WSH1.3 **Anastasios Sklavidis, Athanasios Mavraeidopoulos, Dimitrios Evagelidis and Andreas Michopoulos** (Greece): The Role of HNHS in Preparing for the Olympic Games

WSH1.4 **Andrew A. Armstrong, Richard Brennan and Shepard M. Smith** (USA): Implications of the Navigation Surface Approach to Archiving and Charting Shallow Survey Data

Tuesday, May 25, 2004
14:00-15:30

TS16 Deformation Measurements and Analysis I

Venue: Omega

Commission: 6

Chair: **Stathis Stiros** (Greece)

Rapporteur: **Michel Mayoud** (France)

TS16.1 **G W Roberts, X Meng, E Cosser** and **A H Dodson** (United Kingdom): The Use of Single Frequency GPS to Measure the Deformations and Deflections of Structures

TS16.2 **Joël van Cranenbroeck** (Belgium) and **Neil Brown** (Switzerland): Networking Motorized Total Stations and GPS Receivers for Deformation Measurements

TS16.3 **Lior Shahar** and **Gilad Even-Tzur** (Israel): Vertical Movements in the Carmel Mountain

TS16.4 **Ioannis D. Doukas, Ioannis M. Ifadis** and **Paraskeras Savvaidis** (Greece): Monitoring and Analysis of Ground Subsidence due to Water Pumping in the Area of Thessaloniki, Hellas

TS16.5 **I. Doukas, A. Fotiou, I. M. Ifadis, K. Katsambalos, K. Lakakis, N. Petridou-Chrysohoidou, C. Pikridas, D. Rossikopoulos, P. Savvaidis, K. Tokmakidis** and **I. N. Tziavos** (Greece): Displacement Field Estimation from GPS Measurements in the Volvi Area

TS16.6 **Hasanuddin Z. Abidin, H. Andreas, M. Gamal, Surono** and **M. Hendrasto** (Indonesia): On the Use of GPS Survey Method for Studying Land Displacements on the Landslide Prone Areas

TS17 Impact of New Land Law and Land Reform Law on Good Land Administration

Venue: VIP

Commission: 7

Chair: **Paul van der Molen** (Netherlands)

Rapporteur: **Daniel Steudler** (Switzerland)

TS17.1 **Richard Grover** and **Mia Flores-Bórquez** (United Kingdom): Restitution and Land Markets

TS17.2 **Mick Strack** (New Zealand): Rethinking Property Rights in New Zealand

TS17.3 **Ann-Katrin Myles** (Sweden): Land Management Developments in Belize – Midway Observations by an Alien

TS17.4 **Alick R. Mwanza** (Zambia): White Collar Malpractices in Cadastral Surveying and Their Effects on Secure Land Tenure and Sustainable Development

TS17.5 **Emmanuel Tembo** and **Julian V. Simela** (Botswana): Optimising Land Information Management in Tribal Lands of Botswana

TS17.6 **Alexandrina Zaharia** (Romania): The Warranty and Protection of Private Property in Romania. This paper has not been presented in the conference.

TS18 Usability of Professional Experiences in Education

Venue: Lamda

Commission: 2

Chair: **Pedro Cavero** (Spain)

Rapporteur: **Stig Enemark** (Denmark)

TS18.1 **Bela Markus** (Hungary): Curricula Development in Bologna Process

TS18.2 **Alojz Kopáčík** (Slovakia): Application of the Bologna Process in Higher Geodetic Education in Slovakia

TS18.3 **Neil Hanney, Richard Davis and Paul Watson** (United Kingdom): Tariff Entry Requirements for Surveying Degree Courses in the UK

TS18.4 **Analía Isabel Argerich** (Argentina): The Need to Strengthen Postgraduate Education in Argentine Surveying

TS18.5 **Peter C. Nwilo and Dennis A. Osanwuta** (Nigeria): Surveying and Geoinformation in Africa: Problems and Prospects. This paper has not been presented in the conference.

Workshop - Hydro

WSH2 – Marine Cadastre / CZM

Venue: Theta/Sigma

Chair: **Paul van der Molen** (Netherlands)

Rapporteur: **Ruth Adams** (United Kingdom)

WSH2.1 **Michael Sutherland** (Canada): Sea Level Rise and Coastal Zone Management

WSH2.2 **Diane Dumashie** (United Kingdom): CZM in the UK Policy and Practice: Does It Continue to Evolve?

WSH2.3 **David Neale** (Republic of Trinidad and Tobago): Hydrographic Data as Indicators of Physical Development on the Trinidad West Coast

WSH2.4 **Vassilios N. Grigoriadis and Ilias N. Tziavos** (Greece): Development of a Software Package for the Automation of Measurements in Bathymetric Mapping

Tuesday, May 25, 2004

16:00-17:30

TS19 Deformation Measurements and Analysis II

Venue: Omega

Commission: 6

Chair: **Svend Kold Johansen** (Denmark)

Rapporteur: **Maria Tsakiri** (Greece)

TS19.1 **Ioannis Kotsis, Spyros Karamitsos, Charis Kontoes, Demetris Paradissis, Olga Sycioti, Panagiotis Elias** (Greece) and **Pierre Briole** (France): Verifying InSAR Derived Vertical Differential Displacements by Leveling – Application along Mornos Open Aqueduct

TS19.2 **Gilad Even-Tzur** (Israel): The Stability of Nodal Points in the Leveling Network in the Southwest Part of Israel

TS19.3 **Pekka Lehmuskoski, Paavo Rouhiainen, Veikko Saaranen, Mikko Takalo** and **Heikki Virtanen** (Finland): Thermal Dependence of the Metsähovi Levelling Test Field

TS19.4 **Serdar Erol, Rahmi Nurhan Çelik, Bihter Erol** and **Tevfik Ayan** (Turkey): Assessment of Satellite Based and Terrestrial Measurement Techniques in Monitoring Vertical Deformations

TS19.5 **Stella I. Pytharouli, Villy A. Kontogianni** and **Stathis C. Stiros** (Greece): Analysis of the Geodetic Monitoring Record of the Ladhon Dam, Greece

TS20 SIM Applications

Venue: VIP

Commission: 3

Chair: **Szalbolcs Mihály** (Hungary)

Rapporteur: **Rob Mahoney** (United Kingdom)

TS20.1 **Rahmi Nurhan Çelik, N. Necla Uluğtekin** and **Caner Guney** (Turkey): 4D Geo-referenced Database Approach for GIS

TS20.2 **Ioanna Ch. Karakaidou, Dimitrios E. Evangelidis** and **Georgios A. Bantelas** (Greece): Routine Maintenance Management Systems (RMMS) of Egnatia Odos Motorway

TS20.3 **Hakan Guler, Murat Akad** and **Murat Ergun** (Turkey): Railway Asset Management System in Turkey: A GIS Application

TS20.4 **Caner Guney** and **Rahmi Nurhan Celik** (Turkey): Designing Process of a GIS-based System for the Historical Documentation of Two Ottoman Fortresses on Dardanelles

TS20.5 **Ioannis M. Ifanis, Avraam P. Mavridis** and **Paraskevas D. Savvaidis** (Greece): Internetic GIS: An Open System for Organic Agriculture Administration, Verification and Planning

TS20.6 **Volkan Yildirim** and **Tahsin Yomralioglu** (Turkey): An Address-based Geospatial Application

TS20.7 **Vladimir A. Seredovich, Venyamin K. Pankrushin** and **Boris T. Mazurov** (Russia): Mathematical Modeling and Identification of the Stressed-deformed State of Geodynamic Systems by Spatio-temporal Series of Combined Geodetic and Geophysical Observations in the Light of Prediction of Natural and Technogenic Catastrophes. This paper has not been presented in the conference.

TS21 Developments in Urban and Rural Land Management

Venue: Lamda

Commission: 7 and 8

Chair: **Richard Grover** (United Kingdom)

Rapporteur: **Hendrik Ploeger** (Netherlands)

Introduction papers

TS21.1 **Ivan F. Muzondo** (Zimbabwe), **Michael Barry** (Canada), **David Dewar** and **Jennifer Whittal** (South Africa): Land Conflicts in Informal Settlements: Wallacedene in Cape Town, South Africa

TS21.2 **Terry van Dijk** (Netherlands): A Requiem to Program-driven Rural Land Management

TS21.3 **Esben Munk Sorensen**, **Anne Kirstine Munk Mouritzen** and **Jan K. Staunstrup** (Denmark): Property Development in the Countryside – “In the Storm Centre of Agricultural Policy and Rural Development”

Case studies

TS21.4 **Katarzyna Sobolewska–Mikulska** (Poland): Issues Related to Land Consolidation in Poland after Accession to the European Union

TS21.5 **Mehmet Cete** and **Tahsin Yomralioglu** (Turkey): Cadastre: The Key Component in Urban-based Information Systems

Workshop - Hydro

WSH3 – Vertical Reference Frame & Marine Construction/Dredging

Venue : Theta/Sigma

Chair: **Matt Higgins** (Australia)

Rapporteur: **Andrew Leyzack** (Canada)

WSH3.1 **Steve Shipman** (United Kingdom): The Status of the European Combined Geodetic Network (ECGN) – The Soon to Be Formed IAG Inter-Commission Project 1.2 on Vertical Reference Frames and How the IHO Fits in

WSH3.2 **Ahmed El-Rabbany** (Canada) and **Ruth Adams** (United Kingdom): Relating Data to a Seamless Vertical Reference Surface

WSH3.3 **Laurence Waterhouse** (United Kingdom): GeoScaN, Remote Data Acquisition for Hydrographic, Topographic and GIS Surveying. This paper has not been presented in the conference.

WSH3.4 **Arzu Erener** and **Ertan Gökalp** (Turkey): Mapping the Sea Bottom Using RTK GPS and Lead-Line in Trabzon Harbor. This paper has not been presented in the conference.

Wednesday, May 26, 2004

09:00-10:30

PS3 – Plenary Session - Land Administration and Land Management

Venue: Aphrodite

Chair: **Bettina Petzold**, Vice President of FIG

Rapporteur: Dr. **Chryssy Potsiou**, Greece

PS3.1 Mr. **Helge Onsrud**, Senior Advisor, Norwegian Mapping and Cadastre Authority (Norway): Land Administration in Europe - New Challenges and Opportunities

PS3.2 Mr. **Bengt Kjellson**, Chair of the UN ECE Working Party on Land Administration (WPLA) (Sweden): Future Perspectives of Land Administration and Cadastre

Wednesday, May 26, 2004

11:00-12:30

TS22 Policy: e-Commerce + e-Governance = Future

Venue: Omega

Commission: 1, 3 and 7

Chair: **Kari Strande** (Norway)

Rapporteur: **Yaacoub Saade** (Lebanon)

TS22.1 **Kari Strande** (Norway): Across Boundaries – SDI in a European Perspective (INSPIRE)

TS22.2 **Kauko Viitanen** (Finland): Brand in Real Estate Business – Concept, Idea, Value?

TS22.3 **Çetin Cömert** and **Halil Akinci** (Turkey): WEB Services, NSDI and E-Government

TS22.4 **Winfried Hawerk** (Germany): E-Land Administration 2015 – Vision or Reality?

TS22.5 **Volker Emmel** and **Hartmut Müller** (Germany): Use of German State's Rhineland-Palatinate Spatial Data Infrastructure for e-Government

TS22.6 **Jes Ryttersgaard** (Denmark): Across Boundaries – SDI in a European Perspective (INSPIRE). This paper has not been presented in the conference.

TS23 Engineering Surveys for Industry and Construction Works

Venue: VIP

Commission: 6

Chair: **Gethin Roberts** (United Kingdom)

Rapporteur: **Lothar Gründig** (Germany)

TS23.1 **Evangelia Lambrou** and **George Pantazis** (Greece): Geometric Documentation of Structures After an Earthquake

TS23.2 **Frank Gielsdorf, Andreas Rietdorf and Lothar Gründig** (Germany): Geometrical Modelling of Buildings – The Frame for the Integration of Data Acquisition Techniques

TS23.3 **Ivo Milev and Lothar Gruendig** (Germany): Consistent Maintenance Tools Based on the Rail Track Data Base of German Rail

TS23.4 **Alojz Kopáček** (Slovakia) and **Thomas A. Wunderlich** (Germany): Usage of Laser Scanning Systems at Hydro-technical Structures

TS23.5 **Michel Mayoud** (France): Large Scale Metrology for Research and Industry: Application to Particle Accelerators and Recent Developments

TS24 Planning, Valuation and the Environment

Venue: Lamda

Commission: 9 and 8

Chair: **Stephen Yip** (Hong Kong SAR, China)

Rapporteur: **Kauko Viitanen** (Finland)

TS24.1 **Bayram Uzun and Mehmet Çete** (Turkey): A Model for Solving Informal Settlement Issues in Developing Countries

TS24.2 **Wafula Nabutola** (Kenya): Upgrading Informal Settlements – Kenya: Rural & Urban

TS24.3 **Simon Adcock** (Australia): The Necessity for “Re-found” Brownfield Land and Preventing Environment Catastrophes – A Forensic Valuation/Appraisal Approach to Contaminated Land

TS24.4 **Heikki Seppänen** (Finland): Land Acquisition and Compulsory Means – Cooperation Creates Satisfaction

TS24.5 **Tej Kumar Karki** (Nepal): Regional and Urban Development Policies and Programmes of Nepal. This paper has not been presented in the conference.

Workshop – Archaeological Surveys

WSA1 – Recording Methods

Venue: Theta/Sigma

Chair: **John Badekas** (Greece)

Rapporteur: **D. Skarlaros** (Greece)

Introduction papers

WSA1.1 **Andreas Georgopoulos and Charalambos Ioannidis** (Greece): Photogrammetric and Surveying Methods for the Geometric Recording of Archaeological Monuments

Case studies

WSA1.2 **D. Skarlatos, S. Theodoridou and D. Glabenas** (Greece): Archaeological Surveys in Greece Using Radio-controlled Helicopter

WSA1.3 **Vassilis Fotinopoulos** (Greece): Baloon Photogrammetry for Archaeological Surveys

WSA1.4 **George Vozikis, Alexander Haring, Evangelos Vozikis and Karl Kraus** (Austria/Greece): Laser Scanning: A New Method for Recording and Documentation in Archaeology

WSA1.5 **Charalambos Ioannidis, Maria Tsakiri and Sofia Soile** (Greece): Rapid 3D Recording of Archaeological Sites Found During Construction Development

WSA1.6 **Benjamin Pinia Paton, Francisca Pascual Sanz and Antonio Maniero Garcia** (Spain): Topographic and Photogrammetric Survey of the Altamira Cave. This paper has not been presented in the conference.

WSA1.7 **Sofoklis Alevridis and Maria Skoyrtsidoy** (Greece): The Survey of the Temple of Apollo Epikourios during the Conservation Works. This paper has not been presented in the conference.

Wednesday, May 26, 2004

14:00-15:30

TS25 Appropriate Technologies for Good Land Administration II – 3D Cadastre

Venue: Omega

Commission: 7 and 3

Chair: **Arvo Kokkonen** (Finland)

Rapporteur: **Richard Grover** (United Kingdom)

Introduction papers

TS25.1 **Jantien E. Stoter, Peter J. M. van Oosterom, Hendrik D. Ploeger and Henri J. G. L. Aalders** (Netherlands): Conceptual 3D Cadastral Model Applied in Several Countries

TS25.2 **Uri Shoshani, Moshe Benhamu, Eri Goshen, Saul Denekamp and Roy Bar** (Israel): Registration of Cadastral Spatial Rights in Israel – A Research and Development Project

Case studies

TS25.3 **Jad Jarroush and Gilad Even-Tzur** (Israel): Constructive Solid Geometry as Basis of 3D Future Cadastre

TS25.4 **C. Coşkun Aydın, Osman Demir and Mustafa Atasoy** (Turkey): Third Dimension (3D) in Cadastre and Its Integration with 3D GIS in Turkey. This paper has not been presented in the conference.

TS25.5 **Jantien Stoter, Esben Munk Sørensen and Lars Bodum** (Denmark): 3D Registration of Real Property in Denmark

TS25.6 **Mary Papaefthymiou, Tassos Labropoulos and Panagiotis Zentelis** (Greece): 3D-Cadastre in Greece – Legal, Physical and Practical Issues. Application on Santorini Island

TS25.7 **Hendrik D. Ploeger and Jantien E. Stoter** (Netherlands): Registration of Cross Boundary Infrastructure Objects

TS26 Positioning and Measurement Technologies and Practices II – Laser Scanning and Photogrammetry

Venue: VIP

Commission: 5

Chair: **Georgia Fotopoulos** (Canada)

Rapporteur: **Rudolf Staiger** (Germany)

Introduction papers

TS26.1 **Thorsten Schulz** and **Hilmar Ingensand** (Switzerland): Terrestrial Laser Scanning – Investigations and Applications for High Precision Scanning

TS26.2 **Frank Gielsdorf**, **Andreas Rietdorf** and **Lothar Gruendig** (Germany): A Concept for the Calibration of Terrestrial Laser Scanners

TS26.3 **Michael Scherer** (Germany): Intelligent Scanning with Robot-Tacheometer and Image Processing – A Low Cost Alternative to 3D Laser Scanning?

Case studies

TS26.4 **Alberto Guarnieri** and **Antonio Vettore** (Italy) and **Fabio Remondino** (Switzerland): Photogrammetry and Ground-based Laser Scanning: Assessment of Metric Accuracy of the 3D Model of Pozzoveggiani Church

TS26.5 **Ales Cepek** and **Jan Pytel** (Czech Republic): Acyclic Visitor Pattern in Formulation of Mathematical Model

TS26.6 **Sina Taghvakish** and **Jalal Amini** (Iran): Optimum Weight in Thin Plate Spline for Digital Surface Model Generation. This paper has not been presented in the conference.

TS26.7 **M. Saadatseresht**, **F. Samadzadegan** and **A. Azizi** (Iran): Accessibility Analysis in Camera Placement Network Design for Vision Metrology. This paper has not been presented in the conference.

TS27 Valuation Techniques and Applications

Venue: Lamda

Commission: 9

Chair: **Simon Adcock** (Australia)

Rapporteur: **David Smejkal** (Czech Republic)

TS27.1 **Anna Barańska** (Poland): Criteria of Database Quality Appraisal and Choice Stochastic Models in Prediction of Real Estate Market Value

TS27.2 **Arvydas Bagdonavicius** and **Rimantas Ramanauskas** (Lithuania): Introducing a Computerised Market Value-Based Mass Appraisal System for Real Property Taxation in Lithuania

TS27.3 **Anaía Isabal Argerich** (Argentina): Remote Sensing Applications to Perform Massive Rural Valuations in the Argentine Northwest

TS27.4 **Tahsin Yomralioglu** and **Recep Nisançi** (Turkey): Nominal Asset Land Valuation Technique by GIS

TS27.5 **Greg McGill** and **Frances Plimmer** (United Kingdom): Land Value Taxation: An Investigation into Practical Planning and Valuation Problems

TS27.6 **Dieter Kertscher** (Germany): Digital Purchase Price Collections – The German Way to Provide Transparency for the Real Estate Markets

TS27.7 **Maria Contoman** (Romania): Economic Assessment of Agricultural Grounds – Basis for Introduction of General Cadastre in Romania. This paper has not been presented in the conference.

Workshop – Archaeological Surveys

WSA2 – Modelling and Visualization

Venue: Theta/Lamda

Chair: **Andreas Georgopoulos** (Greece)

Rapporteur: **Apostolos Arvanitis** (Greece)

Introduction papers

WSA2.1 **Petros Patias** (Greece): Photogrammetry in the Visualization Era

Case studies

WSA2.2 **Wolfgang Böhler, Monica Bordas Vicent, Guido Heinz, Andreas Marbs and Hartmut Müller** (Germany): High Quality Scanning and Modeling of Monuments and Artifacts

WSA2.3 **Eric Andrea Mngumi** and **Heinz Ruther** (South Africa): Solid Modeling for Heritage Documentation

WSA2.4 **Panos A. Psimoulis** and **Stathis C. Stiros** (Greece): Modelling an Ancient Theatre Using Analytical Techniques

WSA2.5 **Vaios Balis, Spyros Karamitsos, Ioannis Kotsis, Christos Liapakis and Nikos Simpas** (Greece): 3D – Laser Scanning: Integration of Point Cloud and CCD Camera Video Data for the Production of High Resolution and Precision RGB Textured Models: Archaeological Monuments Surveying Application in Ancient Ilida

WSA2.6 **Derek D. Lichti** and **Stuart J. Gordon** (Australia): Error Propagation in Directly Georeferenced Terrestrial Laser Scanner Point Clouds for Cultural Heritage Recording

WSA2.7 **Marinos Ioannides** (Cyprus): An Efficient Algorithm for the 3D-Reconstruction and Reproduction in Cultural Heritage. This paper has not been presented in the conference.

Wednesday, May 26, 2004

16:00-17:30

TS28 Appropriate Technologies for Good Land Administration III

Venue: Omega

Commission: 7 and 3

Chair: **Francis Gabele** (Belgium)

Rapporteur: **Marc Vanderschueren** (Belgium)

Introduction papers

TS28.1 **Jose Antonio Pinzón Bermúdez** (Colombia) The Usage of Cadastral Information for the Formulation of Environmental Policies – Social Evaluation of Welfare's Losses and Profits due to Externalities

TS28.2 **Berry van Osch** and **Christiaan Lemmen** (Netherlands): Towards the Introduction of Workflow Management at the Netherlands Cadastre

Case studies

TS28.3 **Emin Bank** and **Orhan Mataraci** (Turkey): Cadastral Data Management System in Turkey

TS28.4 **Lefteris Lykouropoulos** and **Giorgos Mourafetis Nikolaos** (Greece): The IT System of the National Cadastre of Greece

TS28.5 **Alberto Beinat**, **Fabio Crosilla** and **Emiliano Sossai**, Italy: An Automatic Analytical Procedure for Searching Corresponding Feature Points in a Cadastral Map

TS28.6 **Charles Paradzayi** and **Heinz Ruther** (South Africa): The Development and Implementation of the Lake Rukwa Basin Integrated Project Environmental Information System (LRBIP-EIS) Database, Tanzania

TS29 Positioning and Measurement Technologies and Practices III – Applications and Processing

Venue: VIP

Commission: 5

Chair: **Dan Schnurr** (United Kingdom)

Rapporteur: **Rob Sarib** (Australia)

Introduction papers

TS29.1 **Maria Tsakiri**, **Dimosthenis Stathas** and **Orthodoxia Arabatzi** (Greece): Advanced Surveying Techniques for Measuring the Marathon Course

TS29.2 **Kefei Zhang**, **Yong Li**, **Ron Grenfell**, **Allan Hahn**, **Chris Gore** and **Tony Rice** (Australia): Developing Prototype Multisensor GPS Rower Monitoring and Coaching Systems for Olympics

TS29.3 **K. Lakakis, P. Savvaidis, I. M. Ifadis and I. D. Doukas** (Greece): Quality of Map-Matching Procedures Based on DGPS and Stand-Alone GPS Positioning in an Urban Area

Case studies

TS29.4 **Dimitrios Papageorgiou, Christos Pikridas, Aristidis Fotiou and Kostas Katsambalos** (Greece): BaselineByCode: An Educational -Purpose Software Package for GPS Baseline Determination Using Code Measurements

TS29.5 **Panos A. Psimoulis, Villy A. Kontogianni, Anna Nickitopoulou, Stella I. Pytharouli Panagiotis Triantafyllidis and Stathis C. Stiros** (Greece): Estimating the Optimum Duration of GPS Static Observations for Short Baseline Length Determination in Greece

TS29.6 **M. Onur Kaplan, Tevfik Ayan and Serdar Erol** (Turkey): The Effects of Geodetic Configuration of the Network on Deformation Analysis

TS29.7 **Ekrem Tusat and Bayram Turgut** (Turkey): Investigation Ambiguity Resolution in GPS and the Effects of Ionospheric Modeling on Base Vector Components. This paper has not been presented in the conference.

Workshop – Archaeological Surveys

WSA3 – Spatial Information Systems for Archaeology

Venue: Theta/Sigma

Chair: **Petros Patias** (Greece)

Rapporteur: **Derec Lichti** (Australia)

Introduction papers

WSA3.1 **Charalambos Ioannidis, Andreas Georgopoulos and Chryssy Potsiou** (Greece): The Need for Development a Spatial Information System for Monument or Archaeological Site's Documentation

Case studies

WSA3.2 **Kostas Tokmakidis, Maria-Eleni Kalivioti and Penelope Nanakou** (Greece): Geographic Information System Applied in Archaeological Site

WSA3.3 **Tevfik Ozludemir, Caner Guney, Lucienne Thys-Senocak and Rahmi Celik** (Turkey): Roadmap for a Multidisciplinary Project: The Historical Documentation of Two Ottoman Fortresses on the Dardanelles – Seddulbahir & Kumkale

WSA3.4 **Georgia Anagnostopoulou** (Greece) The Archaeological Survey and the Graphical Documentation of the Excavation in Monastiraki Square for the Athens Metro Construction – Excavation Site B'

WSA3.5 **Madan Mohan** (India): Historical Information System for Surveying Monuments and Spatial Data Modeling for Conservation of Cultural Heritage in Delhi. This paper has not been presented in the conference.

WSA3.6 **E. G. Vergounov and Yu. P. Gulyayev** (Russia): Optimal Land Measuring Work Package for the Archaeological Research in Gorny Altai and Creation of the Specialized GIS (Geographic Information System). This paper has not been presented in the conference.

ESRI Workshop - ArcGIS Survey Analyst: Integrating survey data in GIS

Venue: Lamda

Facilitator: **Mike Weir**, ESRI

Thursday, May 27, 2004

14:00-15:00

Closing Ceremony

Venue. Ballroom III

Prof. Dr.-Ing. **Holger Magel**, President of FIG: Closing Address and Recommendations of the FIG Working Week 2005

Handover of the FIG Banner to the Local Organising Committee of FIG Working Week 2005

FIG Fanfare