

XXIII FIG Congress and INTERGEO 2006

Munich, Germany, October 8-13, 2006



The XXIII FIG Congress was organised in Munich, Germany, 8-13 October 2006. The congress was attended by 1300 delegates from about 100 countries. Together with the INTERGEO fair and other simultaneous events the congress was attended by 3000 participants. The INTERGEO trade fair attracted about 19 500 people. These were the biggest numbers to any FIG event in the history. The XXIII FIG Congress and INTERGEO were organised by the International Federation of Surveyors (FIG) and the German Association of Surveying – Society for Geodesy, Geo-Information and Land Management (DVW).

dom and a basis for (peace) investment; this is the highest priority on the development agenda. Slum upgrading is not successful without secure tenure. Forced evictions... Surveyors' knowledge is needed: FIG is a premium partner of UN because of the needs for surveyors' knowledge. We need better land management systems with better data; governments should make money available for that as they do for other infrastructures. The price of globalisation cannot be that people lose their identity.

The presentations included also a welcome address by Mr. Hagen Graeff, President of German DVW that has hosted the FIG Council for the past four years. The two congress directors, Thomas Gollwitzer for FIG 2006, and Walter Henninger for INTERGEO, shared the responsibility to chair the opening ceremony that was a joint event for FIG and INTERGEO. This joint activity resulted in record attendance to the opening ceremony, where the doors had to be closed after 1,400 participants had filled in the main hall at ICM.

At the closing ceremony, President Magel presented the Conference summary. Apart from the impressive number of participants, he could report that many young professionals attended the congress and that FIG now has a plan to integrate a students'/young surveyors' forum.

As the final conclusion, President Magel summarised: "*Surveyors can shape the change by collaboration, communication and cooperation. Surveyors can shape the change with passion, energy and enthusiasm by working in many dimensions. Surveyors need wings for flying in the air and boots for walking on the rough ground*".

FIG Technical programme

The technical and scientific programme of the congress consisted of four plenary sessions (three jointly with INTERGEO and one also with IAG), 90 technical sessions and couple of workshops (history of surveying, quality management for geodata and hydrography, as well as an ESRI workshop): in the technical sessions about 500 papers were presented and almost 100 displayed in the poster exhibition.

The general opinion on the technical sessions seemed to be that the quality of papers in general was higher than at some previous events and that attendance in many sessions was surprisingly high. This especially applies to commissions 8, 9 and 10. Naturally there were also comments that there were too many papers in the sessions not allowing enough time for presentation and for discussion. There was also some last minute drop-outs based on different reasons, most by financial and visa problems.

As normal, several technical tours offered good opportunities to learn about German surveying and technology.

The FIG Congress proceedings on CD (ISBN 87-90907-52-3) consist of three main parts: Technical Programme, Meetings and National Reports. In the Technical Programme, one can find all papers delivered in the congress. The papers are in pdf format, and one can find the following 14 papers coming from Croatia on the CD:

Technical Session 23 (TS23) – NSDI

TS23.2 Željko Bačić and Ivana Šainović (Croatia): Developing Infrastructural Frame for Nationwide Management of Spatial Information in Croatia (0438)

TS23.5 Zvonko Biljecki, Mladen Rapačić and Tomislav Tonković (Croatia): Spatial Information Management of Croatian Ministry of Defence (0816)

TS 26 – Reference Frame

TS26.1 Marinko Bosiljevac and Marijan Marjanović (Croatia): New Official Geodetic Datum of Croatia and CROPOS System as Its Implementation (0447)

TS 31 – Portals and Land Administration

TS31.4 Damir Pahić and Irena Magdić (Croatia): e-Katastar – The Browser of Cadastral Data (0434)

TS 34 – Curricula I

TS34.4 Miljenko Lapaine, Zdravko Kapović and Stanislav Frangeš (Croatia): New University Curricula of Geodesy and Geoinformatics in Croatia (0599)

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At the opening ceremony Dr. Edmund Stoiber, Bavarian Minister President, gave the welcome address. Prof. Holger Magel, FIG President gave the Presidential Address *Shaping the Change 2002 to 2006 – The German Period of FIG* focussing on the policies and achievements of FIG during the German presidency. Dr. Klaus Töpfer, long-time Executive Director of the United Nations Environment Programme (UNEP), gave the keynote address at the opening ceremony. In the keynote address, Dr. Töpfer focussed on *For a More Just World – the Surveyors' Role for Achieving Sustainable Development* that was considered as the highlight of the congress and many participants ranked it among the top speeches over many years. In his presentation, he linked measuring with the perception of ideologies. In Germany, and in Europe, the difference in prosperity between 'east' and 'west' had to be managed – the difference worldwide is much bigger. It is not only charity, it is obligation and investment that are relevant. The Millennium Development Goals are about decreasing poverty: the western world throws away daily more food than needed by all people without food. Access to water is an issue. There is no doubt that there is a lot of progress, but there are many pockets of remaining problems. There is a lot of work to be done in the implementation of rule-based systems in property right registration and secure tenure: "*if you want a conflict, then destroy the cadastre*". Clear and accepted property situations are a basis for free-

XXIII. kongres FIG-a i INTERGEO 2006

München, Njemačka, 8-13. listopada, 2006



XXIII kongres FIG-a (Međunarodne federacije geodeta) održan je u Münchenu, 8-13. listopada 2006. Na kongresu je bilo oko 1300 delegata iz oko stotinjak zemalja. Zajedno sa sajmom INTERGEO i ostalim usporednim događanjima kongresu je prisustvovalo oko 3000 sudionika. Sajam INTERGEO privukao je oko 19 500 posjetitelja. XXIII. kongres FIG-a i INTERGEO organizirali su Međunarodna federacija geodeta i Njemačko geodetsko udruženje – Društvo za geodeziju, geoinformacije i upravljanje zemljištem. (DVW).

XXIII. kongres FIG-a

Pozdravnu riječ na svečanom otvorenju održao je bavarski premijer dr. Edmund Stoiber. Prof. Holger Magel, predsjednik FIG-a, u svom predsjedničkom govoru naslovljenom *Oblikovanje promjena od 2002. do 2006. – Njemačko razdoblje u FIG-u* istaknuo je politiku i postignuća FIG-a u doba njemačkog predsjedavanja. Dr. Klaus Töpfer, dugogodišnji izvršni direktor Programa za okoliš Ujedinjenih naroda (United Nations Environment Programme, UNEP) dao je ključne smjernice naslovljene *Za pravičniji svijet – uloga geodeta u postizanju održivog razvoja*. Te su smjernice postale i moto kongresa, a mnogi su sudionici ocijenili taj govor jednim od ponajboljih govora posljednjih godina. U svojoj prezentaciji on je povezo mjerjenja s percepcijom ideologija.

U Njemačkoj i u Europi moraju se urediti razlike u napretku između "zapada" i "istoka" – razlike su još veće u svijetu. Nije riječ samo o obzirnosti, to je važna obveza i ulaganje. Milenijski razvojni cilj usmjeren je ka smanjenju siromaštva: zapadni svijet dnevno baci hrane više nego je dovoljno za sve gladne na svijetu. Jedan od problema je i pristup vodi. Nema sumnje da je u tom smjeru postignut veliki napredak, međutim postoje mnogobrojni neriješeni problemi. Predstoji puno posla u usvajanju pravnih sustava nad evidencijom vlasništva i osiguravanju posjeda: "ako želiš sukob onda uništi katastar". Jasna i usvojena stanja vlasništva temelj su slobode i temelj za (mirno) ulaganje; to je od najvećeg značaja za program razvoja. Poboļšanje uvjeta života u siromašnim četvrtima nije uspješno bez osiguravanja posjeda. Prisilne deložacije ... Potrebna su znanja geodeta: FIG-a je prvi

partner UN-a upravo zbog potrebe za tim znanjima. Potrebni su nam bolji sustavi upravljanja zemljištem s boljim podacima; vlade bi trebale osigurati novac za to, kao što ga osiguravaju za ostalu infrastrukturu. Cijena globalizacije ne može biti gubitak identiteta.

U uvodnim dijelima pozdravnu je riječ održao i Hagen Graeff, predsjednik Njemačkoga geodetskog udruženja (DVW) koje je bilo domaćin Vijeća FIG-a posljednjih nekoliko godina. Dva direktora, Thomas Gollwitzer za FIG 2006 i Walter Henninger za INTERGEO zajednički su predsjedali svečanom otvorenju, zajedničkom za oba događaja. To je rezultiralo rekordnim prisustvovanjem na svečanom otvorenju zbog čega su se vrata morala zatvoriti nakon što je 1400 sudionika ispunilo glavnu dvoranu ICM-a.

Prilikom svečanog zatvaranja predsjednik Magel dao je sažetak kongresa. Osim o impresivnom broju sudionika, on je izvjestio i o tome da je veliki broj mladih stručnjaka sudjelovao na kongresu i da FIG-a namjerava integrirati forum studenata i mladih geodeta.

Kao konačni zaključak predsjednik Magel je sažeo: "Geodeti mogu oblikovati promjene suradnjom i komunikacijom. Geodeti mogu oblikovati promjene sa strašću, energijom i entuzijazmom radeći u mnogim dimenzijama. Geodeti trebaju krila za let u zraku i čizme za hod po tvrdoj zemlji".

Tehnički program kongresa

Tehnički i znanstveni program kongresa sastojao se od četiri plenarne sjednice (tri zajedno s INTERGEO-om i jedna s IAG-om), 90 tehničkih sjednica i nekoliko radionica (povijest geodezije, upravljanje kvalitetom prostornih podataka i hidrografije te ESRI-jeva radionica): na tehničkim sjednicama prikazano je oko 500 radova uz još stotinjak postera.

Opći je dojam da je kvaliteta radova na tehničkim sjednicama bila općenito veća nego na prethodnim sličnim događanjima, a da je odaziv na mnogim sjednicama bio iznenađujuće dobar. To se posebno odnosi na povjerenstva 8, 9 i 10. Naravno, bilo je i prigovora da je prevelik broj radova unutar jedne sjednice, što je omogućilo dulje prezentacije i diskusiju.

Bilo je i odgoda u posljednji tren zbog različitih razloga, uglavnom novčanih problema i problema s vizama.

Nekoliko tehničkih posjeta ponudilo je mogućnost upoznavanja s njemačkom geodezijom i tehnologijom.

Zbornik radova kongresa na CD-u (ISBN 87-90907-52-3) sastoji se od tri glavna dijela: Tehnički program, Sastanci i Nacionalna izvješća. U dijelu s tehničkim programom mogu se naći svi radovi izloženi na kongresu. Radovi su u formatu PDF, a na CD-u se nalazi sljedećih 14 radova iz Hrvatske:

Tehnička sjednica 23 (TS23) – NSDI (Nacionalna infrastruktura prostornih podataka)

TS23.2 Željko Bačić i Ivana Šainović (Hrvatska): Developing Infrastructural Frame for Nationwide Management of Spatial Information in Croatia (0438) (*Razvoj infrastrukturnog okvira za upravljanje prostornim informacijama na državnoj razini u Hrvatskoj*)

TS23.5 Zvonko Biljecki, Mladen Rapačić i Tomislav Tonković (Hrvatska): Spatial Information Management of Croatian Ministry of Defence (0816) (*Upravljanje prostornim informacijama Ministarstva obrane Republike Hrvatske*)

TS 26 – Reference Frame (Referentni okvir)

TS26.1 Marinko Bosiljevac i Marijan Marjanović (Hrvatska): New Official Geodetic Datum of Croatia and CROPOS System as Its Implementation (0447) (*Novi službeni geodetski datum Hrvatske i sustav CRO-POS kao njegova implementacija*)

TS 31 – Portals and Land Administration (Portali i administracija zemljištem)

TS31.4 Damir Pahić i Irena Magdić (Hrvatska): e-Katastar – The Browser of Cadastral Data (0434) (*e-Katastar – pretraživač katastarskih podataka*)

TS 34 – Curricula I (Nastavni programi I)

TS34.4 Miljenko Lapaine, Zdravko Kapović i Stanislav Frangeš (Hrvatska): New University Curricula of Geodesy and Geoinformatics in Croatia (0599) (*Novi studijski programi geodezije i geoinformatike u Hrvatskoj*)

TS 37 – e-Governance – Case Studies

TS37.1 Ivan Landek, Igor Vilus and Zoran Vujić (Croatia): Establishment of the National Spatial Data Geo-portal in Croatia (0445)

TS37.2 Vlado Antonović and Ivan Novak (Croatia): GISOSS – One-Stop-Shop GIS (0569)

TS 41 – Introduction Session: Technology – Global Players – Service Providers

TS41.3 Željko Bačić, President of Euro-Geographics (Croatia): New Customers, New Technologies and New Concepts – How to Meet Challenges (0901)

TS 48 – Engineering Surveys for Construction Works II

TS48.6 Mladen Zrinjski, Marko Džapo and Loris Redovniković (Croatia): Underground Geodetic Basis of the Tunnel “Mala Kapela” (0422)

TS 76 – Valuation Standards and Practices

TS76.4 Hrvoje Tomić, Hrvoje Matijević and Siniša Mastelić Ivić (Croatia): Development of Land Valuation System (0542)

TS 82 – e-Governance – Developments

TS82.2 Vlado Cetl, Miodrag Roić and Mario Madjer (Croatia): Development of Cadastral Metadata Service (Cadastral Metadata Database) (0368)

TS 85 – Standards

TS85.5 Mario Blažević (Croatia): Harmonization of Land Register and Cadastre in Croatia (0565)

TS 88 – Engineering Surveys for Industry and Research

TS88.5 Zdravko Kapović, Ante Marendić and Rinaldo Paar (Croatia): Deformation Analysis of the Holcim Ltd. Cement Factory Objects (0595)

FIG General Assembly

The FIG General Assembly was held in two sessions on Sunday, 8 October and on Friday, 13 October 2006 at the Holiday Inn. Major decisions of the General Assembly include: Prof. Stig Enemark

from Denmark was elected as the new President of FIG 2007-2010. Mr. Jürg Kaufmann (Switzerland) and Prof. Kazimierz Czarnecki (posthumously) were appointed as Honorary Members of FIG.

Four new FIG publications were launched during the General Assembly.

FIG Publication 35 – Enhancing the Representation of Under-Represented Groups in FIG

FIG Publication 36 – Administering Marine Spaces: International Issues

FIG Publication 37 – Guide on the Development of a Vertical Reference Surface for Hydrography

FIG Publication 38 – The Contribution of the Surveying Profession to Disaster Risk Management

Several new members were adopted and endorsed during the General Assembly. The number of member associations has increased from 85 to 102 countries after the meetings in Munich.

The next XXIV FIG Congress and Working Week, and XXXIII FIG General Assembly is planned in Sydney, Australia, 9-16 April, 2010.



INTERGEO 2006

This time, the exhibition of the FIG Congress was combined with the annual INTERGEO Trade Show. The exhibition attracted more than 19 500 visitors and was expanded to three halls at the ICM covering 30 000 sqm of exhibition space and introducing 550 exhibitors.

The conference part of INTERGEO attracted 1 800 participants to its technical sessions and forums. The conference

was open to all FIG participants, but because of the fully packed FIG programme, the time did not allow many delegates to attend many of these interesting sessions.

The State Geodetic Administration of the Republic of Croatia gave an initiative at the beginning of 2006 to present Croatian geodesy and geoinformatics in an appropriate way to the world and European public at the INTERGEO fair. This initiative was recognized by the Faculty of Geodesy of the University of Zagreb, GalaGIS d.o.o., Geofoto d.o.o., Geoplan d.o.o., GISDATA d.o.o., Croatian Chamber of Architects and Engineers in Construction, Croatian Geodetic Institute, Hydrographic Institute of the Republic of Croatia, Croatian Cartographic Society, IGEA d.o.o., MCS d.o.o. and Zavod za fotogrametriju d.d.

The State Geodetic Administration was the coordinator of Croatian participation at the fair. The Architectonic Bureau Matković d.o.o. was responsible for common visual identity, distribution and design of rented area. Croatian firms and institutions rented 138 sqm of fair area that was divided into three neighbouring blocks. The exhibition area was fitted out by German firm Meplan GmbH from Munich.

A printed informative brochure in English titled *Public-Private Partnership in Geodesy, Geomatics and Geoinformation* was prepared for visitors. This booklet contains basic data about business activities, profiles and products of Croatian exhibitors.

The Croatian Cartographic Society had a modest, but recognizable booth at INTERGEO 2006. The vice-president M. Lapaine and the secretary D. Tutić was there and explained the main goals of the Society to visitors. The visitors with interest in Croatian cartography could obtain materials prepared in advance: a leaflet with basic data about the Society in English, last issues of the *Cartography and Geoinformation* journal, and the brochure *Public-Private Partnership in Geodesy, Geomatics and Geoinformation*. The biggest interest was shown by young visitors – students, as well as by a large number of colleagues from Croatia and neighbouring countries, former students of the Faculty of Geodesy, University of Zagreb.

INTERGEO 2007 will take place in Leipzig from September 25 to 27, 2007, being as its theme *Knowledge and Action for Planet Earth*.

Miljenko Lapaine, Dražen Tutić

- TS 37 – *e-Governance – Case Studies (e-vlada – proučavanje slučaja)*
- TS37.1 Ivan Landek, Igor Vilus i Zoran Vujić (Hrvatska): Establishment of the National Spatial Data Geoportal in Croatia (0445) (*Uspostavljanje nacionalnog portala prostornih podataka u Hrvatskoj*)
- TS37.2 Vlado Antonović i Ivan Novak (Hrvatska): GISOSS – One-Stop-Shop GIS (0569) (*GISOSS – GIS "sve na jednom mjestu"*)
- TS 41 – *Introduction Session: Technology – Global Players – Service Providers (Uvodna sjednica: Tehnologija – globalni igrači – davatelji usluga)*
- TS41.3 Željko Bačić, predsjednik Euro-Geographics (Hrvatska): New Customers, New Technologies and New Concepts – How to Meet Challenges (0901) (*Novi korisnici, nove tehnologije i novi koncepti – kako se suočiti s izazovima*)
- TS 48 – *Engineering Surveys for Construction Works II (Inženjerska geodezija u graditeljstvu)*
- TS48.6 Mladen Zrinjski, Marko Džapo i Loris Redovniković (Hrvatska): Underground Geodetic Basis of the Tunnel "Mala Kapela" (0422) (*Podzemna geodetska osnova tunela "Mala Kapela"*)
- TS 76 – *Valuation Standards and Practices (Standardi i praksa procjene vrijednosti)*
- TS76.4 Hrvoje Tomić, Hrvoje Matijević i Siniša Mastelić Ivić (Hrvatska): Development of Land Valuation System (0542) (*Razvoj sustava za procjenu vrijednosti zemljišta*)
- TS 82 – *e-Governance – Developments (e-vlada – razvoj)*
- TS82.2 Vlado Cetl, Miodrag Roić i Mario Mađer (Hrvatska): Development of Cadastral Metadata Service (Cadastral Metadata Database) (0368) (*Razvoj servisa katastarskih metapodataka (baza katastarskih metapodataka)*)
- TS 85 – *Standards (Norme)*
- TS85.5 Mario Blažević (Hrvatska): Harmonization of Land Register and Cadastre in Croatia (0565) (*Harmonizacija zemljišne knjige i katastra u Hrvatskoj*)
- TS 88 – *Engineering Surveys for Industry and Research (Inženjerska geodezija u industriji i istraživanjima)*

TS88.5 Zdravko Kapović, Ante Marendić i Rinaldo Paar (Hrvatska): Deformation Analysis of the Holcim Ltd. Cement Factory Objects (0595) (*Analiza deformacija na objektima tvornice cementa Holcim, d. o. o.*)

Generalna skupština FIG-a

Generalna skupština FIG-a održala se na dvije sjednice i to u nedjelju 8. listopada i u petak, 13. listopada 2006. u hotelu Holiday Inn. Najvažnije odluke Generalne skupštine su: prof. Stig Enemark iz Danske izabran je za novoga predsjednika FIG-a za razdoblje 2007-2010. Jürg Kaufmann (Švicarska) i prof. Kazimierz Czarnecki (posthumno) izabrani su za počasne članove FIG-a.

Za vrijeme Generalne skupštine predstavljene su četiri nove FIG-ove publikacije:

FIG Publication 35 – Enhancing the Representation of Under-Represented Groups in FIG (Poboljšanje statusa podzastupljenih skupina u FIG-u)

FIG Publication 36 – Administering Marine Spaces: International Issues (Upravljanje pomorskim prostorima: međunarodna pitanja)

FIG Publication 37 – Guide on the Development of a Vertical Reference Surface for Hydrography (Vodič za razvoj referentne plohe za visine u hidrografiji)

FIG Publication 38 – The Contribution of the Surveying Profession to Disaster Risk Management (Prinos geodetske djelatnosti upravljanju rizikom od katastrofa)

Za vrijeme Generalne skupštine primljeno je i potvrđeno nekoliko novih članova. Nakon sastanka u Münchenu broj članova FIG-a povećan je s 85 na 102.

Sljedeći XXIV. kongres, radni tjedan FIG-a i XXXIII. generalna skupština održat će se u Sydneyu, u Australiji, 9-16. travnja 2010.

INTERGEO 2006

Održavanje kongresa FIG-a ovaj je put upriličeno zajedno s godišnjim poslovnim sajmom INTERGEO. Sajam je privukao više od 19 500 posjetitelja, a bio je smješten u tri hale sajma ICM, na ukupno 30 000 m² izložbenoga prostora na kojem je izlagalo 500 izlagača.

Konferencijski dio INTERGEO-a svojim tehničkim sjednicama i forumima privukao je 1800 sudionika. Konferencija je bila otvorena za sve sudionike kongresa FIG-a, međutim zbog opsežnog programa FIG-a za mnoge je delegate vremenski bilo nemoguće prisustvovati tim zanimljivim sjednicama.

Državna geodetska uprava RH inicirala je početkom 2006. prepoznatljivu prezentaciju hrvatske geodezije i geoinformatike svjetskoj i europskoj javnosti na sajmu INTERGEO. Tu su inicijativu prepoznali Geodetski fakultet Sveučilišta u Zagrebu, GalaGIS d.o.o., Geofoto d.o.o., Geoplan d.o.o., GISDATA d.o.o., Hrvatska komora arhitekata i inženjera u graditeljstvu, Hrvatski geodetski institut, Hrvatski hidrografski institut, Hrvatsko kartografsko društvo, IGEA d.o.o, MCS d.o.o i Zavod za fotogrametriju d.d.

Državna geodetska uprava bila je koordinator hrvatskog nastupa na sajmu. Arhitektonski ured Matković d.o.o. bio je zadužen za zajednički vizualni identitet, raspodjelu i dizajn unajmljenog prostora. Hrvatske tvrtke, institucije i udruženja unajmili su 138 m² izložbenoga prostora koji je bio podijeljen u tri susjedna bloka. Opremanje štandova izvela je njemačka tvrtka Meplan GmbH iz Münchena.

Tiskana informativna brošura na engleskom jeziku pod naslovom *Public-Private Partnership in Geodesy, Geomatics and Geoinformation (Javno-privatna suradnja u geodeziji, geomatici i geoinformatici)* bila je pripremljena za posjetitelje. Ta je knjižica sadržavala osnovne podatke o poslovnim aktivnostima, profilima i proizvodima hrvatskih izlagača.

Hrvatsko kartografsko društvo imalo je skroman, ali prepoznatljiv štand na sajmu INTERGEO 2006. Dopredsjednik M. Lapaine i tajnik D. Tutić bili su na raspolaganju posjetiteljima kako bi im objasnili glavne ciljeve društva. Posjetitelji zainteresirani za hrvatsku kartografiju mogli su dobiti unaprijed pripremljene materijale: letak na engleskom jeziku s osnovnim podacima o društvu, posljednji broj časopisa *Kartografija i geoinformacije* i brošuru *Public-Private Partnership in Geodesy, Geomatics and Geoinformation*. Najveći interes pokazali su mladi posjetitelji – studenti, ali i veliki broj kolega iz Hrvatske i susjednih zemalja, uglavnom bivši studenti Geodetskog fakulteta Sveučilišta u Zagrebu.

INTERGEO 2007 održat će se u Leipzigu, 25.-27. rujna 2007. Tema sajma je *Znanje i djelovanje za planet Zemlju*.

Miljenko Lapaine, Dražen Tutić