No. 6

isprs Silk Road for Information from Imagery

Beijing ISPRS

ISPRS DAILY

The XXI Congress

The International Society for Photogrammetry and Remote Sensing

3-11 July 2008 Beijing, China

Wednesday 09 July 2008

A Recipe for Success

ISPRS Daily asked the chairman of the Local Organising Committee, Mr Song Chaozhi for his views on the ingredients for a successful congress.

More than 2800 guests and exhibitors have attended the XXI ISPRS Congress. The exhibition, comprising around 150 exhibitors spread over two levels, has been an eye-opening experience. The response from

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The Aero-photogrammetry & Remote Sensing Bureau donates US$ 10,000 to the ISPRS Foundation.

ARSC Donation

The ARSC has donated $US 10,000 to the ISPRS Foundation.

The Aero-photogrammetry & Remote Sensing Bureau (ARSC) in Xi'an, China, has donated US$ 10,000 to the ISPRS Foundation, becoming the first Chinese company to contribute financial support to the non-profit organisation.

Presented at the opening of the ISPRS Congress Exhibition on 9 July, the money will be used to promote international scientific exchange in photogrammetry, remote sensing and geospatial information.

The Foundation enables its beneficiaries, many of whom come from developing countries, to advance their knowledge and skills for the benefit of a regional or international community.

ISPRS President Prof. Ian Dowman, ISPRS Secretary-General, Prof. Orhan Altan and Prof. Dieter Fritsch of the ISPRS Foundation visited the ARSC exhibition booth with ARSC President Zhang Wenruo.

"We thank the ARSC for its generous donation," said Prof. Dowman. "We also hope other organisations will follow the ARSC's example and extend their support to the Foundation."

The ARSC is a Gold Sponsor of the Congress.

Support the ISPRS Foundation by purchasing a raffle ticket at the ISPRS Foundation booth near the Exhibition Hall.

Council Roster Updated

Newly elected council members and Cliff Ogleby, Congress Director of ISPRS 2012

The ISPRS Daily No. 5 incorrectly identified the new ISPRS Council Members. The correct details are:

President: Orhan Altan (Turkey)
Secretary General: Chen Jun (China)
First Vice President: Ian Dowman (UK)
Second Vice President: Ammatzia Pelede (Israel)
Treasurer: Mike Renslow (USA)
ISPRS 2012 Congress Director: Cliff Ogleby (Australia)

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Archiving in 3D

Prof. W. Schuhr of the University of Applied Sciences in Magdeburg, Germany, is part of a research group aiming to popularise the use of 3D visualisation techniques beyond the scientific community.

"3D photography should not be limited to scientific use. It should also be used in daily life," says Schuhr.

The idea first came to life at an archaeology site in Turkey, where archaeologists were using manual sketches to represent historical monuments and structures.

"Sketching is a practical approach to recording cultural heritage objects, but it embeds the perspective of the drawer in the document. This influences the interpretation and preservation of art and history," says Schuhr. "What we want is a way of preserving information more objectively."

Schuhr and his colleagues are extending the use of the 'down under' technique of displaying imagery in 3D, which requires only a mirror and photographs.

"The aim is not to replace the technology for side-by-side pairing. The aim is to replace subjective manual sketches with photographs or, even better, 3D photographs.

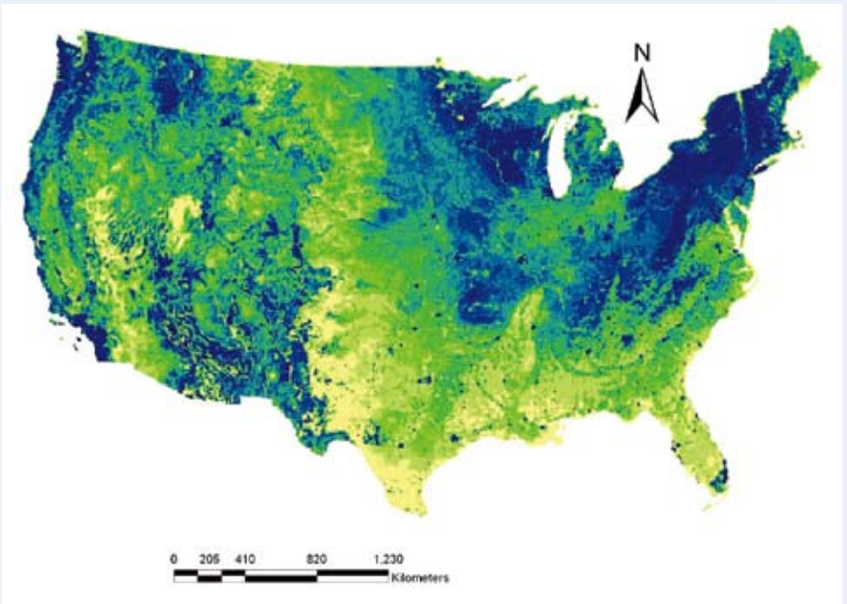
"We hope that by expanding the affordability and accessibility of 3D representation using pairing methods, imagery, monuments and cultural heritage objects will be recorded as accurately and objectively as possible."

Support the ISPRS Fountation & WIN!

Support the ISPRS Foundation by purchasing a raffle ticket at the ISPRS Foundation booth near the Exhibition Hall on Level 1.

Technical Commission Report

Technical Commission VII: Thematic Processing, Modelling and Analysis of Remotely Sensed Data



TC VII is presenting more than three hundred papers at the congress, in oral technical sessions, special sessions, theme sessions, and poster sessions. Four volumes of proceedings have been produced to publish the papers being presented in Beijing.

Highlights of the papers being presented include:

1. Rapid developments in SAR remote sensing data sources, such as the high resolution RADARSAT-2 from Canada, the COSMO-Skymed SAR satellite from Italy (the highest SAR spatial resolution system in the world, providing detailed images of the earth under all weather conditions), and the German TerraSAR.

The launch of these satellites has driven much research in image and data fusion methodologies. The recent Sichuan earthquake is a good example of how SAR data, along with other data sources, can be used to greatly assist relief efforts in difficult terrain and adverse weather conditions.

2. Fundamental physics to enable a better understanding of the geophysical parameters which influence the signals recorded by remote sensing sensors.

3. New image processing algorithms and analysis techniques which show that rapid progress has been made in image classification methods, going from traditional/conventional pixel-based techniques to advanced context-based and texture-based classification procedures.

Other important presentations cover change detection methods. These range from global change studies using temporal data sets to local change detection algorithms, moving target detection (e.g. vehicles and security applications) to methods for monitoring changes in urban growth, forest decline and land use.

Over the past four years, TC VII has organised more than 25 conferences, workshops and other activities around the globe. These events were attended by more than 4000 participants. This is a significant achievement, given the fact that TC VII was established only four years ago.

The ISPRS Council is to be applauded for its decision to establish this Commission. Over the next four year period, TC VII will no doubt grow and advance the ISPRS mission to promote remote sensing methodological research around the world.

Celebrating with John Trinder

ISPRS First Vice-President, John Trinder, will turn 70 this year. The ISPRS celebrates his achievements.

John Trinder was born on 28 October 1938 in Sydney, Australia. He entered the profession of surveying with a small private survey practice company in January 1956 and undertook studies for a Bachelor of Surveying degree part-time while working as a pupil surveyor. He became a registered surveyor in 1960 and completed the Bachelor of Surveying degree in 1962.

In 1963, with financial assistance from a Netherlands Government Scholarship, John undertook studies for a master's degree in photogrammetry at ITC, which at that time was in Delft, The Netherlands. He completed a BSc and MSc at ITC, having written a master's thesis on image quality of aerial photography.

He was appointed as a lecturer in the Department of Surveying at the University of NSW (UNSW) in 1965. This began his long employment at UNSW. John gained his PhD degree in 1971, with a thesis on pointing accuracy to targets on aerial photographs. John eventually gained the post of Head of School of Surveying and Spatial Information Systems (renamed School of Geomatic Engineering from 1994-2003). He retired in July 1999. He continues to teach at UNSW, where he holds the position of Visiting Emeritus Professor.

John's work at UNSW has included teaching, research supervision and research in photogrammetry and surveying. His research was initially centred on the continuation of the PhD research on image quality of aerial photography, based on modulation transfer functions. Subsequently, he studied information extraction from aerial photography and satellite images based on a semi-automatic approach using 'snakes', and then automatic information extraction based on first order logic.

He has recently studied DEM determination from satellite and digital aerial images by image matching, and data fusion of LiDAR and image data using the Dempster-Shafer algorithm. He has authored more than 150 papers in journals and conference proceedings and successfully supervised a number of PhD students, many from China. He won two Grand Trophies of the Talbert Abrams Awards for papers published in the ASPRS journal *Photogrammetric Engineering and Remote Sensing* in 1982 and 1989 and the Eminent Persons Award from the Spatial Science Institute in Australia in 2004.

John has attended all ISPRS Congresses since 1972 and also many workshops and symposia. Later in his career, he devoted a great deal of his time and energy to ISPRS responsibilities, most recently as Secretary General (1996-2000), President (2000-2004) and First Vice President (2004-2008). He was elected Honorary Member of ISPRS at the opening ceremony.

Since all ISPRS personnel are at the Congress, Congress Director Prof. Chen Jun took the opportunity to hold a birthday party on Sunday 6 July. The event was an outstanding success and enjoyed by more than 60 guests. John was overwhelmed by the hospitality of his Chinese hosts. He is very grateful to Xu Guanhoa, Song Chaozhi, Prof. Chen Jun and all the Chinese people who contributed to its organisation.

Editorial Team

The local organising committee will publish eight issues of ISPRS Daily: Thursday, Friday, Saturday, Monday (7th July), Tuesday, Wednesday, Thursday and Friday.

If you would like to contribute editorial, please submit material to Inga or Vienna no later than noon each day.

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Today's Highlights

9 July 2008 - Wednesday

Exhibition

- **Show Hours**
  Time: 09:00-17:00
  First Floor

Users' Forum

- **UF-3: On-demand Geospatial Data Updating, Integration and Web-based Geospatial Information Service**
  Time: 13:30-15:30
  Room: (Convention Hall No.3)

CATCON

- **CC-1: Computer Assisted Teaching CONtest - CATCON(1)**
  Time: 08:30-10:00
  Room: (305 Conference Room)
- **CC-2: Computer Assisted Teaching CONtest - CATCON(2)**
  Time: 10:30-12:00
  Room: (305 Conference Room)

Technical Visits

- **TV-1: National Geomatics Centre of China (NGCC)**
  08:30 Depart from BICC for NGCC
  11:00 Leave NGCC for BICC
- **TV-2: Chinese Academy of Surveying and Mapping (CASM)**
  13:00 Depart from BICC for CASM
  15:00 Leave CASM for BICC

Social Program

- **SE-3: Acrobatic Show**
  Time: 19:15-20:15
  Depart from BICC at 18:00
  (meal box to be provided)
  Place: Tian Di Theatre
- **SE-5: Beijing Night Show**
  Time: 19:00-21:20
  Depart from BICC at 18:00
  Place: Beijing Night Show Theatre

Technical Commission Report

Technical Commission Report VI: Education and Outreach

TC VI deals primarily with educational matters related to photogrammetry, remote sensing and the spatial information sciences. The technological advancements in these three fields are numerous. Amateur photography, internet-based information services such as Google Earth and car navigation are widely used by the public today. The growth in interest in these applications is matched by increasing technical and educational needs.

Education and training are no longer restricted to a few years of university, generally speaking. Rapid advancements in technology have increased the importance of lifelong education in our fields. The internet and e-learning play significant roles in lifelong education. Despite the growing availability of educational materials and e-learning courses, it is not easy for beginners and students to find appropriate educational materials. Promoting online information to the public will help to widen recognition and acceptance of e-learning material.

> *"Advancements in technology have increased the importance of lifelong education..."*

WG VI/2 on e-learning undertook the project *Analysis of E-Learning Software and Guidelines for Quality Assurance in Photogrammetry, Remote Sensing and GIS*. The results were reported the Congress. This is a first step towards developing a quality assurance process to strengthen confidence in, and acceptance of, e-learning in university programs.

TC VI has also organised the educational software contest CATCON5 (9 July) at the Congress, to promote development of free educational software in our technical fields.

TC VI is also responsible for providing education and capacity-building opportunities. WG VI/3 on *International Cooperation and Capacity Building* has organised a number of sessions on capacity building at the various international meetings. The Special Interest Group on *Technology Transfer Caravan* has provided annual study opportunities to students and young scientists of various countries. Like a travelling caravan, ISPRS experienced professionals visit different countries to teach quality seminars. This method has proven quite effective.

Promotion of students is another important focus of TC VI. At the ISPRS Congress in Istanbul in 2004, the Student Consortium (SC) was set up under TC VI as the first official student organisation within the ISPRS. WG VI/5 on *Promotion of the Profession to Students* was established to support the Consortium. WG VI/5 and the SC jointly organised three successful summer schools from 2004 to 2008. The SC published a number of newsletters and expanded its international network.

Students presented their papers the 2nd Youth Forum (YF), hosted on 5 July of this year's Congress. During the YF panel session, SC statutes and officers were approved.

The Congress is an opportunity for students to learn about ISPRS processes. This is a valuable experience for active SC members, who may become leaders of our society in the future.

Kohei Cho
Tokai University
JAPAN

Iridium Revisited

A new deal could make real-time monitoring of every point on Earth a genuine possibility.

Iridium Inc. has proposed that its new constellation of 66 satellites carry remote sensing instruments. This deal could make real-time monitoring of every point on Earth a genuine possibility. However, the industry will need to move fast. A decision to start building needs to be made within two years.

Jose Achache, the secretariat director of the Group on Earth Observations (GEO), announced the offer in one of the keynote presentations that opened the conference.

The mission of GEO is to build GEOSS, the Global Earth Observation System of Systems. This is an organisation designed to promote co-operation in the design, deployment and operation of Earth-observing spacecraft.

Iridium is a communications satellite constellation. It was proposed, funded and built by the US Motorola Corporation, with the idea of providing a global mobile telephone service from orbiting satellites.
However, the business case was developed before modern GSM mobile phones were deployed. In the interval between the decision to build the satellites and the network becoming operational, millions of GSM mobile phones were sold to users around the world. As a result, the market for Iridium phones collapsed. The company went bankrupt.

Amid fears that Motorola would be forced to crash all its satellites into the sea, a new company was established. This company is now a solid $300 million/per annum business.

However, its satellites are coming to the end of their useful lives. The current owners are looking for potential payload customers to shoulder some of the cost of replacing them and the remote sensing industry is a potential target.

Achache says the offer has come at a fortunate time. The industry is moving from a focus on science to a focus on decision-support and problem-solving. Remote sensing is becoming politically significant. Without it, it will be impossible to manage the current demands of economic growth, much less climate change.

To rise to this challenge of making the industry politically relevant, remote sensors will need to do a couple of things...

But to rise to this challenge of making the industry politically relevant, remote sensors will need to do a couple of things.

One is to make sure that the correct parameters are sensed. It is vital to manage this properly. Gaps in our capability can emerge in the most peculiar places.

Achache points out, for instance, that despite the critical importance of satellites to measuring rising sea level, there are no current plans to replace the current generation of satellite altimeters.
Another set of problems for GEOSS is developing techniques so data from different sensors can be mixed together. Politicians will demand, for instance, that data from one satellite is the same as data from another.

But this concern with the data – rather than the challenges of building the satellite itself or the national prestige of launching it – also means that governments are more ready to consider alternative funding models than ever before.

Achache says GEOSS members are now looking at all kinds of private/public funding models. In the past, making remote sensing financially viable has been difficult. But he says that putting a value on services by the environment to the economy could potentially make it easier in future.

This article was written by Jon Fairall, editor of Congress media partner, Asian Surveying and Mapping *in Sydney, Australia.*

What's on the Menu

10 July 2008 - Thursday

Plenary Session 3

Time: 08:30-10:00
Room: Convention Hall No.1

Exhibition

- **Show Hours**
  Time: 09:00-17:00
  First Floor

Technical Visits

- **TV-3: Institute of Remote Sensing Applications (IRSA) & Institute of Geographic Sciences and Natural Resources Research (IGSNRR)**
  13:00 Depart from BICC for IRSA and IGSNRR
  15:00 Leave IGSNRR for BICC
- **TV-7: NavInfo Co., Ltd. (NavInfo)**
  08:30 Depart from BICC for NavInfo
  11:00 Leave NavInfo for BICC
- **TV-8: National Satellite Meteorological Centre (NSMC)**
  13:00 Depart from BICC for NSMC
  15:00 Leave NSMC for BICC
- **TV-9: Twenty First Century Aerospace Technology Co., Ltd. (TFCAT)**
  13:00 Depart from BICC for TFCAT
  15:00 Leave TFCAT for BICC

Social Program

- **SE-7: Gala Dinner**
  Time: 19:00-22:00
  Depart from BICC at 18:00
  Place: Jiuhua Spa & Resort

Important Notice

ISPRS 2008 Congress Book

First authors of each of the chapters of the ISPRS 2008 Congress Book are invited to pick up a complimentary copy of the book from Conference Room 303. Copies may be collected any time before the end of the Congress.

(continued from page 1)

delegates, participants and exhibitors so far has been very positive and the Congress continues to run smoothly.

Of course, behind the bright lights and polished presentations are months of planning, organising and endless meetings.

"I am pleased to hear that guests and delegates are enjoying their stay in Beijing. This is the first time we have hosted such a large conference in China," said Mr Song.

"We have been very lucky to have so much support from the ISPRS Council, our State Bureau of Surveying and Mapping (SBSM) and our friends and volunteers. The SBSM has played a significant role in planning and worked well with a very efficient and productive Local Organising Committee."

"We are delighted to share with foreign geospatial experts our achievements. It has been a valuable chance for our academics and researchers to build partnerships with the industry, share technical knowledge, research opinions and methodologies. The exhibitions will also certainly stimulate the progress and development of our industries.

"I sincerely hope all Congress participants take advantage of this event to strengthen mutual understanding, enhance collaboration and promote the development of the field. Photogrammetry and remote sensing technology has great potential to improve our quality of life and promote sustainable development.

"I would like to take this opportunity to thank everyone – the LOC, partners, sponsors, and volunteers – who have helped to make this event such a success. I hope that they will get back from this Congress as much as they have put in, and that everyone will gain a little something from this Congress."

Program of the Day

- **TS WG III/4: Building Detection and Reconstruction**
  Time: 08:30-10:00
  Room: (Convention Hall No.2A)
- **TS WG IV/4 (1): Landscape Modelling and Visualisation**
  Time: 08:30-10:00
  Room: (Convention Hall No.2B)
- **TS WG VII/5 (1): Processing of Multi Temporal Data and Change Detection**
  Time: 08:30-10:00
  Room: (Convention Hall No.2C)
- **TS WG II/1 (2): Spatio-temporal Modeling**
  Time: 08:30-10:00
  Room: (201A Conference Room)
- **TS SS-12: Observation and Monitoring of Polar Regions**
  Time: 08:30-10:00
  Room: (201B Conference Room)
- **TS WG V/2 (3): Surveying Technologies in Archaeological and Architectural Documentation**
  Time: 08:30-10:00
  Room: (201C Conference Room)
- **TS WG I/6: Small Satellites**
  Time: 08:30-10:00
  Room: (307 Conference Room)
- **TS SS-10: Standards and Standardization of Geo-spatial information**
  Time: 10:30-12:00
  Room: (Convention Hall No.2A)
- **TS SS-17: Western Area Mapping and 1:50000 Database Updating in China with High Resolution Imagery**
  Time: 10:30-12:00
  Room: (Convention Hall No.2B)
- **TS WG II/7 (1): Quality of Spatio-temporal Data and Models**
  Time: 10:30-12:00
  Room: (Convention Hall No.2C)
- **TS WG IV/3 (2): Automated Geospatial Data Acquisition and Mapping**
  Time: 10:30-12:00
  Room: (201A Conference Room)
- **TS WG VIII/12 (2): Geological Mapping, Geomorphology and Geomorphometry**
  Time: 10:30-12:00
  Room: (201B Conference Room)
- **TS WG VII/4 (2): Advanced Classification Techniques**
  Time: 10:30-12:00
  Room: (201C Conference Room)
- **TS ThS-7: 3D City Modeling**
  Time: 10:30-12:00
  Room: (307 Conference Room)
- **TS WG IV/8: Spatial Data Integration for Emergency Services**
  Time: 16:00-17:30
  Room: (305B Conference Room)
- **TS WG V/5: Development in Image Sensor Technology**
  Time: 16:00-17:30
  Room: (Convention Hall No.2B)
- **TS WG VIII/9: Arid Lands, Land Degradation and Desertification**
  Time: 16:00-17:30
  Room: (Convention Hall No.2C)
- **TS WG VIII/4: Management of Tropical Environments Research**
  Time: 16:00-17:30
  Room: (201A Conference Room)
- **TS WG VI/3: International Cooperation and Capacity Building**
  Time: 16:00-17:30
  Room: (201B Conference Room)
- **TS WG VIII/1 (2): Urban Components Classification**
  Time: 16:00-17:30
  Room: (305C Conference Room)
- **TS SS-19: Recording and Documenting the Acropolis of Athens - From Classical Ancient Greece to Modern Olympics**
  Time: 16:00-17:30
  Room: (305B Conference Room)
- **TS WG VIII/2 (2): Land Slides and Earthquaques**
  Time: 16:00-17:30
  Room: (307 Conference Room)

Let's Go Chile 2009

Santiago is hosting Latin America's first International Cartography Conference in 2009.

Santiago is hosting the 24th International Cartography Conference (ICC) in November 2009. Organised by the International Cartography Association (ICA), the ICC is an important event for the cartography community.

"2009 is a very special year for Chile. It is the year we celebrate 200 years of independence. We want to share our achievements in geo-spatial technology and the development of our society," said Rodrigo Barriga Vargas, President of the Local Organising Committee.

The ICC will be the first international cartography conference ever held in Latin America.

"This is very special event for the Latin American geo-spatial community. It will be a great opportunity for Spanish experts to share their research, opinions and technology with scientists from around the world," said Vargas. "We have also arranged simultaneous translations for our international peers.

"Our country has a large variety of landscapes. Glaciers, active volcanoes, deserts, rainforest, mountain ranges, beaches – Chile has them all. Participants will be able to experience first hand the variety of the physical landscape and learn about mapping in the Chilean way."

Visit www.icc2009.cl for more information.

Youth Forum Awards

Congratulations to the following winners of the Youth Forum poster and paper awards:

Poster Awards

1. Natalia Borowie C.
   Building Extraction From ALS Data Based on Regular And Irregular Tessellations
2. Sascha Klonus
   Comparison of Pan-sharpening Algorithms for Combining Radar and Multi-spectral Data
3. Gao Liang, Ban Yifang
   Investigations of SAR Polarimetric Features on Land-Cover Classification

Paper Awards

1. Hannes Püschel, Martin Sauerbier, Henri Elsenbeiss
   A 3D Model of Castle Landenberg (CH) from Combined Photogrammetric Processing of Terrestrial and UAV-Based Images
2. Wang Yunsheng, Holger Weinacker, Barbara Koch, Krzysztof Sterénczak
   LiDAR Point Cloud-based Fully Automatic 3D Single Tree Modelling in Forest and Evaluations of the Procedure

ISPRS Congress Exhibition