content

2004number 1

introduction

The first edition of *ITC News* for 2004 and it's already very clear that the year is gathering momentum. Plans for conferences (page 5) and alumni gatherings (page 21) are taking shape, special courses are being scheduled (page 14), new initiatives are up and running (page 15). And with technology developing at such a fast and furious pace too, maybe this is the year to give more thought to updating your own knowledge and skills. ITC offers a wide range of short courses and, who knows, there may be one listed that's just what you're looking for. Anyway, if you are thinking along these lines, page 9 has some sound advice: "Apply now!"

And while we're on the subject of technological progress, if you turn to page 2, you'll find an interesting article on the Meteosat Second Generation system. Although designed to serve the needs of nowcasting applications and numerical weather prediction, the system offers a great deal more besides, as you'll quickly discover. Exciting times, yes, but sometimes a note of nostalgia tends to creep in. A backward glance to a more leisurely age, when flying a kite was excitement enough. Well, it still can be, especially if you want to document the impact of indigenous soil and water conservation practices or take low-altitude pictures of archaeological excavations. After reading page 7, you'll look at the kite in a whole new light, and may find yourself surfing the Internet in search of the KAP network.

Yet even today, when highly sophisticated tools are available for gathering data, storing data, analysing data, it can still be a case of back to basics. A little private detective work may be called for when details go missing, believed lost or strayed, and remote sensing is not the solution. The details referred to (see page 21), of course, are the correct addresses of our alumni, which we need if we are to keep them posted of upcoming events and the latest developments. If you feel the urge to turn sleuth and help us to update our database, we'll be more than grateful. But if not, we hope you'll simply sit back and enjoy this latest edition of *ITC News.* You're bound to come across some names you know, and may be very surprised to learn what their owners are doing nowadays.

Janneke Kalf
Managing Editor

colofon

ITC NEWS is published quarterly, by ITC, Enschede, the Netherlands

Managing Editor:	Janneke Kalf	Correspondence to:	Managing Editor
			ITC NEWS
Editing:	Janice Collins		P.O.Box 6
Design&PrePress:	Henk Scharrenborg		7500 AA Enschede
	(Composer DTP service)	Phone:	+31 (0)53 487 44 11
	Andries Menning	Fax:	+31 (0)53 487 45 54
Printing:	PlantijnCasparie Zwolle	E-mail:	itcnews@itc.nl

The views expressed by the contributors do not necessarily reflect those of ITC

Meteosat Second Generation-1 @ ITC

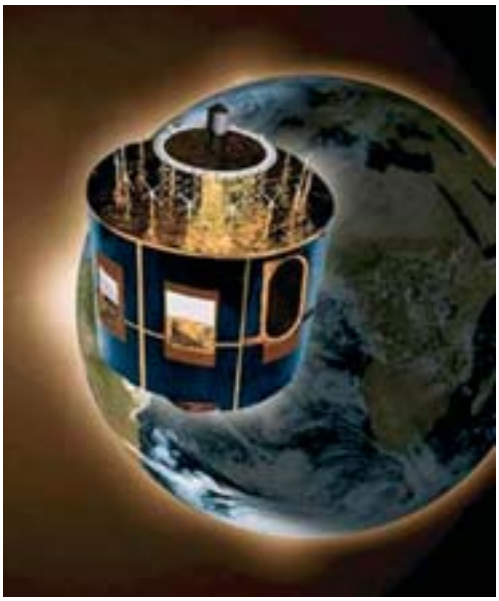
Ben Maathuis maathuis@itc.nl
Boudewijn van Leeuwen leeuwen@itc.nl

Since the middle of March 2004, ITC has been directly receiving Meteosat Second Generation satellite images. With the progression of science and developments in the accuracy of numerical weather prediction, the need for more frequent and comprehensive data from space has arisen.

This has led to the Meteosat Second Generation (MSG) system. Although it is designed to serve the needs of nowcasting applications and numerical weather prediction (NWP), in addition to providing important data for climate monitoring and research, MSG also provides unique opportunities in support of earth science research. The new satellite system comprises a series of three identical satellites that are expected to provide observations and services for at least 12 years. Each satellite has a planned operational lifetime of seven years. The information obtained by this new generation of geostationary satellites will open up a whole range of opportunities for new and innovative applications.

MSG-1 was launched from Europe's spaceport in Kourou (French Guiana) on 28 August 2002, aboard an Ariane-5 launcher, and, after a testing period, commenced routine operations on the 29 January 2004. Now the satellite is called Meteosat-8. The advanced SEVIRI radiometer aboard the MSG series will enable Earth to be scanned in 12 spectral channels, from visible to thermal infrared (including water vapour, ozone and carbon dioxide channels), at 15-minute intervals.

The SEVIRI specifications were carefully chosen to match operational requirements. Each of the 12 channels was selected with one or more specific applications in mind, when used either alone or in conjunction with data from other channels. Each has a well-established heritage, ensuring that their characteristics are well understood and the data can be used on an operational basis. The actual instrument includes a primary mirror with a diameter of 51 cm and infrared de-

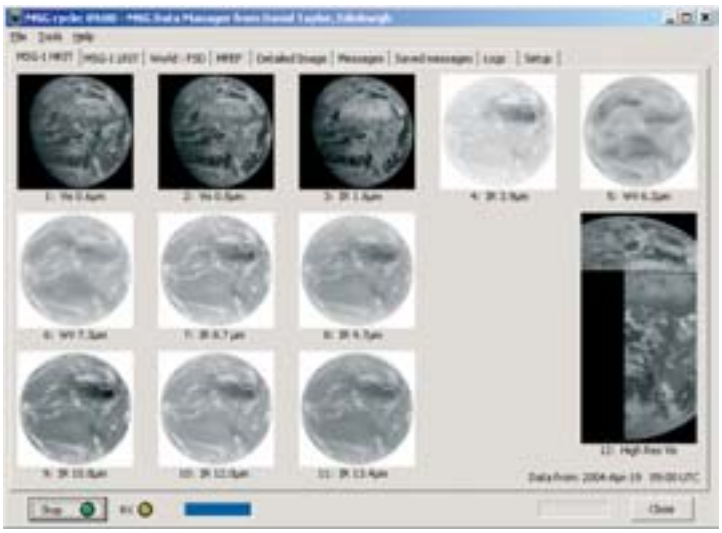


Artist impression MSG-1

tectors. The raw images are generated through a combination of an east-west scan obtained from the spinning of the entire satellite at 100 revolutions per minute, and a stepping of a telescope mirror from south to north after each scan line. The spatial resolution of the SEVIRI instrument has been slightly increased (at intervals of 3 km); the HVR (high-resolution visible) channel even has a sampling distance interval of just 1 km.

The raw data recorded by the satellite are transmitted to the EUMETSAT ground receiving station in Darmstadt (Germany). The received data are preprocessed, rectified, compressed and split into small packages of data. These packages are sent to the uplink station in Usingen (Germany) and are subsequently transmitted to the Hotbird-6 satellite (combined with some other services). At ITC, using a satellite dish oriented and directed

towards the Hotbird-6 satellite position, the DVB (digital video broadcasting) signal can be received and the LNB (low noise block) of the dish converts the signal to a lower frequency. The DVB-PCI card in the computer demodulates and decodes the continuous DVB data stream. Meteosat-8 transmits the data in LRIT (low-rate image transmission) and HRIT (high-rate image transmission) modes. After central ground processing at EUMETSAT, images in full resolution are transmitted in HRIT mode within five minutes of observation. LRIT will disseminate a subset of the HRIT SEVIRI imaging data in five spectral channels in a "slightly lossy" compressed form within 15 minutes of observation. Both modes are currently received, together with the so-called "foreign satellite data" from GOES East, GOES West, GMS and Meteosat-5 (at three-hour intervals), allowing near global coverage.
The EUMETCAST service for Europe is based on Ku-band transmissions and is only guaranteed to cover the EUMETSAT member states and cooperating states. The dissemination service for Africa is a C-band-based transmission also covering selective regions outside the EUMETSAT member states and cooperating states. At a recent EUMETSAT council meeting, it was decided that the EUTELSAT Atlantic Bird-3 satellite would carry the C-band dissemination service for MSG-1 data. The format of the C-band dissemination will be the same as for Hotbird-6 dissemination. The data will be uplinked to Atlantic Bird-3 via the Fucino ground station in Italy.



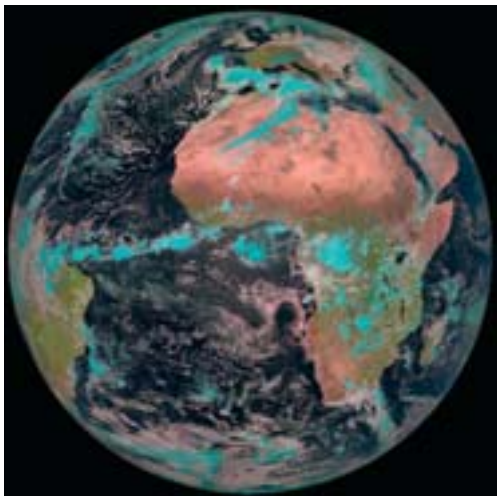
Users wishing to acquire MSG image data by direct reception will have to procure station equipment, and, for those wishing to receive data more frequently than six-hourly, an additional cost for decryption hardware and software will apply. No additional cost for data receiving applies in the case of ITC, as the data are requested for educational and research project use. The total hardware and software costs (apart from the two computer systems used for receiving and processing) are less than €500, making this technology affordable and accessible to many of ITC's alumni organisations and institutes.

The MSG ground receiving station and the data collected offer a number of benefits for ITC's educational programmes. For example, it is now possible to demonstrate:

- how data are received, (pre)processed, analysed, stored and visualised
- the spectral and temporal characteristics of the reflective and thermal spectral domains, using (diurnal) time series
- the geostationary satellite state of the art and monitoring capabilities, not only for MSG but also using the "foreign geo-satellites" for (near) global coverage and comparing them with polar orbiting (meteo) satellites.

The data collected offer a large number of Professional Master and Master of Science thesis topics for a wide range of disciplines, from data structure/management topics to topics oriented more towards the earth science discipline.

Furthermore, the received data will strongly support a number of spearheads that have been defined in the ITC research programme, such as climate change and monitoring food security and water resources. Although the primary objective of the MSG system is to help to improve weather forecasting services, it has proved to be essential for many applications involving observations of the ocean and land surfaces. Information about the surface is vital for the NWP and climate models, while satellite observations of clouds, precipitation, dust and aerosols, volcanic ash plumes, forest fires, vegetation, crop yields, snow, ice, hurricanes, tropical cyclones and floods have obvious benefits for a variety of uses. MSG cannot see through



False color composite from channel 3 (0.6 µm), channel 2 (0.8 µm) and channel 1 (1.6 µm), of 1200 o'clock on March 23, 2004

clouds, but its 15-minute image cycle makes it much easier to see the surface through fleeting gaps in the cloud cover. Its (calibrated) multispectral imagery is also well suited to advanced research that will extract increasing amounts of (quantitative) information from these basic data, and a large number of applications relevant within the framework of the ITC research spearheads are benefiting positively from this initiative, for example:

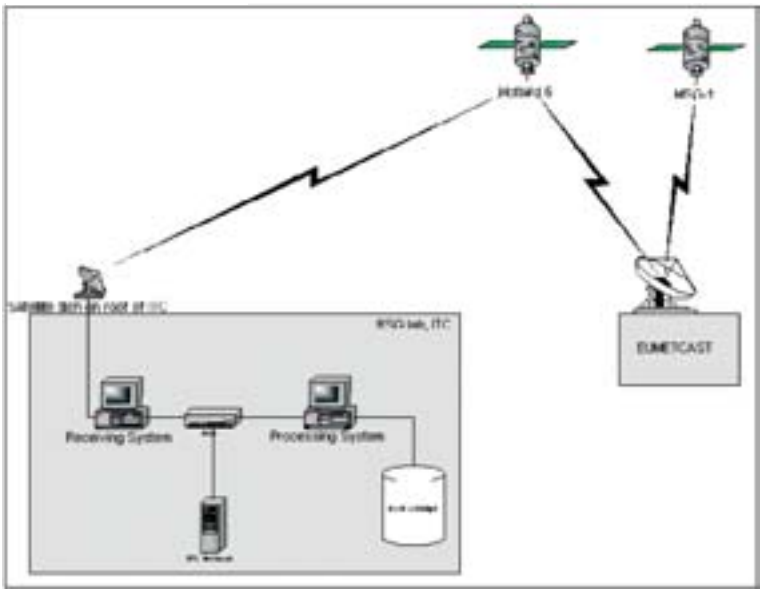
- timely temporal geo-information provision at continental scale (e.g. Africa)
- climate monitoring (cloud parameters, ocean state parameters, components of surface radiation budget and components of radiation budget at the top of atmosphere)
- land surface analysis (surface albedo and emissivity, aerosols, land surface temperature, soil moisture, evapotranspiration rate).

These initiatives will also result in further algorithm and software development, which in turn is relevant for ITC's educational programmes.

In addition to providing possibilities for expanding knowledge of working with these primary data sources, collaboration with other centres and institutes is a challenging prospect from the point of view of strengthening ITC's position not only through cooperation in the Netherlands and Europe, but also through our own network in Africa for example. Within ITC, an MSG user group will be formed, bringing together interested staff and PhD students. Through this group, future (multidisciplinary) research topics can be formulated, among other things.
At present there are already contacts with EUMETSAT, FAO, KNMI (the Dutch Meteorological Organization), Wageningen University and the Free University Amsterdam.

Given the enormous increase in spectral information in particular, a large number of applications can be further developed. With regard to the research envisaged within the Department of Water Resources, which initiated this activity, the potential hydrological applications are of prime interest. MSG data can be used in a variety of ways to improve our (timely) knowledge of the hydrological cycle, both over Europe and particularly over Africa. Information derived from MSG, including cloud cover, precipitation, albedo, soil moisture, vegetation cover (using indices such as the NDVI) and evapotranspiration, can be combined with data from other satellites in a variety of approaches and models. Geo-information data structures needed for (near) real-time monitoring of extreme weather events (cyclones, floods) are other aspects offering new challenges.

System overview



Further information on Meteosat-8 can be obtained at http://www.eumetsat.de. The ITC point of contact is Drs Boudewijn van Leeuwen (leeuwen@itc.nl).

announcements

Alumni Survey 2003 Produces Double Positive Response

Joost Teuben teuben@itc.nl

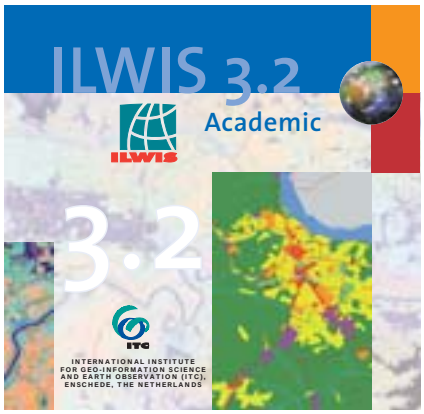
Since the foundation of ITC in 1950, the alumni community has grown to more than 15,000 individuals spread over 160 countries. It is our aim to continually adapt our short, diploma and degree courses not only to the ever-changing needs of the organisations our alumni are working for, but also to the changing tasks and responsibilities of the alumni themselves, as mid-career managers.

To monitor and assess the impact of our training on the performance of our alumni within their organisations, a survey has been carried out among alumni who have graduated since 2000. This was the year the ITC curricula underwent a major restructuring process and six educational programmes started to offer both a Professional Master (PM) course and a Master of Science (MSc) course.

A total of 731 students have graduated since then, gaining either a PM or MSc degree. The questionnaire was distributed to all of them in analogue and digital form in August 2003, and the results were analysed in January 2004.

The "double positive response" relates to the number of replies (almost 50% of the contacted alumni responded) and the appreciation of ITC education (expressed almost unanimously).

We can conclude that both the PM and MSc courses are suited to the tasks and responsibilities of our alumni, and are highly ranked. The MSc course, however, is considered slightly more relevant to enhancing institutional strength in geo-information science. When comparing our courses with degree programmes of other universities, more then 95% of our alumni consider our courses to be equal or even better in quality. Detailed descriptions of current positions, tasks and responsibilities were provided by our alumni, and these will be used when reviewing curricula, with a view to achieving an even greater match between content and teaching methodologies and the required knowledge and skills.



We are grateful to our alumni for their comments and responses and, as token of appreciation, a free ILWIS licence has been provided to all respondents.

1st Asian Space Conference on Asian Space Technology Developments and Applications and their Impacts on Culture, Commerce and Communities

Thailand will host the 25th Asian Conference on Remote Sensing (ACRS) in Chiang Mai, Thailand, from 22 to 25 November 2004.

Concurrently with the 25th ACRS, and in view of renewed interest and developments in space technology and small satellite missions in Southeast Asia and other Asian countries, Thailand will also host the 1st Asian Space Conference (ASC), a new forum on space technologies and their implications for society, economy and culture.

The ASC organisers cordially invite space engineers and scientists, sociologists and anthropologists, rural and urban planners, economists, political scientists, legal experts, educators and satellite service providers (telecommunications, earth observations, meteorologists) from all over Asia, Oceania and outside the region to participate in this unique event - a space forum and the first of its kind to focus on space technology and the socio-economic implications. The conference will provide opportunities for academics and professionals to interact outside their own special disciplines. They will be able to discuss and share information, as well as knowledge of space applications for solving the common problems of sustainable economic growth, poverty alleviation, social stability, disaster mitigation and the digital divide. In

addition, the conference aims to create awareness and interest in the public at large in space products and their benefits to society.

Conference Themes

Space systems and technologies in the Asian region

- Descriptions of current space activities and missions in Asia, national space systems and infrastructures (satellite technology, acquisition, processing and use of satellite data)
- Proposals and studies of future space missions, cooperative regional and international activities
- Role and usefulness of small satellites

Satellite applications

- Telecommunications (national and international), weather forecasting, earth resources monitoring (land, sea and air), sociological uses (education, distance learning, rural telemedicine), environmental monitoring for disaster control and mitigation (floods, forest fires, oil spills)
- Legal aspects of, and framework for, satellite applications and the role of private enterprise under international and national law

Impacts of satellite applications on regional cultures, commerce and communities

- Experiences, examples and lessons learnt
- Use of satellites (data and communications) for policy and planning decisions in agriculture and farming to alleviate poverty and promote economic growth in rural areas
- Applications of space technology in telemedicine and distance learning

Promotion of space science and technology in education (schools, universities etc.) and their usefulness to society

- Role of government, international organisations and business in bringing the benefits of satellite applications to both urban and rural communities; creation of awareness
- Financing of space activities, public and private sectors

Sponsors and Organisers

- Geo-informatics and Space Technology Development Agency (GISTDA), Thailand
- International Institute for Asian Studies (IIAS), Leiden University, The Netherlands
- International Institute for Geo-information Science and Earth Observation (ITC), The Netherlands

Detailed information on the 1st ASC (and also the 25th ACRS) can be found at http://acrs2004.gistda.or.th

UNAM and ITC Sign Memorandum of Understanding

Sjaak Beerens beerens@itc.nl

Since the early 1960s over 80 people from Mexico have graduated from ITC, some with a PhD.

A small dedicated group led by Dr José Luis Palacio, formerly director of the Institute of Geography and now director-general for postgraduate studies at the National Autonomous University of Mexico (Universidad Nasional Autonoma de Mexico (UNAM)), has been pursuing a formal and structural collaborative relationship with ITC for many years.

After years of collaboration, which started in 1998 with joint short courses, a Memorandum of Understanding has now been signed. This happened in March this year, during the visit to Mexico of Sjaak Beerens, ITC's director external affairs, and will facilitate yet more cooperative efforts.

Such efforts were given an immediate boost by the UNAM management: the commitment of financial support for the coming three years.

Signing the Memorandum of Understanding between UNAM (represented by Secretary-General Enrique del Val Blanco; second from right) and ITC (represented by Director External Affairs Sjaak Beerens)

Award for ITC from the Survey of Kenya

Tom Loran loran@itc.nl

In December of last year, the Survey of Kenya celebrated its 100th anniversary, a festive occasion surrounded by a range of festivities.

The Survey of Kenya is part of the Kenyan Ministry of Lands, which (among others) is responsible for land policy and physical planning, surveying and mapping, and land registration and valuation. The Ministry has its own training centre in the Kenya Institute of Surveying and Mapping (KISM), which is located close to Nairobi. However, many staff members of the Survey of Kenya have also studied abroad. Since the 1960s, a large number of staff members have been to ITC for training in the fields of cartography, surveying and mapping, and in the use of geographical information systems, aerial photography and satellite imagery.

During the centenary celebrations, ITC was presented with an award in recognition of its contribution to developing staff capacity in the organisation. The photograph shows Director of Surveys Dr H. Nyapola and an ITC alumnus from 1989 presenting the award to Mr Tom Loran, who represented ITC on that occasion.

Director of Surveys Dr H. Nyapola and an ITC alumnus from 1989 presenting the award to ITC's Tom Loran

Kite Aerial Photography

ITC News itcnews@itc.nl

All over the world the kite is known as a toy, but it can also be used as a tool. The Frenchman Arthur Batut attached a camera beneath a large kite and managed to take the first kite-borne photographs of his hometown Labruguière in 1888. All sorts of mechanisms were invented to manipulate the camera shutter, from fuses to timers.

The Russian engineer Thièlé even attached seven cameras to his kite to obtain topographic information for the construction of the Trans-Siberian railway. In the professional context, however, kite aerial photography always remained a niche application and was overtaken by aerial photography from aeroplanes and satellites. Still, for personal pleasure, a number of people have continued to take semi-high-altitude pictures using a kite.

Nowadays, this technique is known as KAP (kite aerial photography) and a large KAP network exists on the Internet. It uses the new technologies such as radio control for distant camera manipulation, and ultra-light materials such as spinnaker for the foil and glass fibre for the kite frame. Although this kind of photography is a leisure activity for most KAP'ers, there is also a large and interesting field of professional application. Plant scientists use KAP to monitor the de-

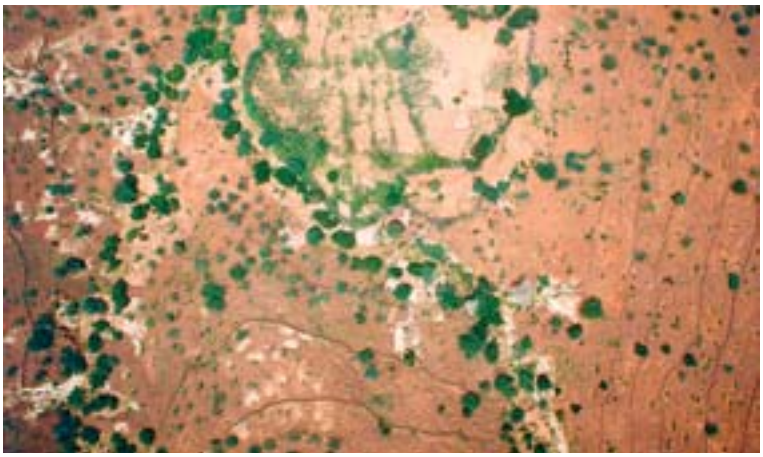
View of the kite with the rig attached to the kite line; the rig holds the camera and the radio control

velopment of their experimental plots. Archaeologists take low-altitude pictures of their excavations. And development workers in semi-arid Africa produce high-resolution pictures to document the impact of the soil and water conservation technologies applied by the local population.

In his book *L'Oeil du Cerf-Volant*, which is based on his experiences in Niger, West Africa, Eric Tielkes describes the various possibilities offered by this technique. The well-documented handbook is illustrated with many colour pictures and gives practical and technical information on kites and the equipment used. The criteria to apply when selecting a kite, camera and rig are dealt with in detail. In the second chapter of this book, co-authored by former ITC staff member Dr Lucas Janssen, the information of images taken from a satellite, an aeroplane and a kite is compared.

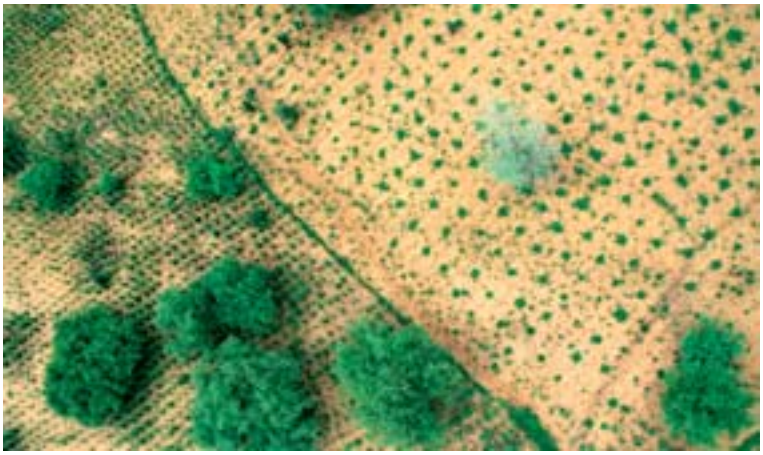
The book also provides comprehensive information on how to set up a kite-flying mission and the things to take into account, such as weather, ground equipment and landmarks. Moreover, some examples are given on the use of computer software to interpret the information provided by the pictures - for example, how pictures can be used for non-destructive estimation of shrub biomass and how to quantitatively compare a time series of pictures of the same site. Finally, the book gives an idea of equipment costs and lists the addresses of suppliers.

In conclusion, it has to be said that kite aerial photography offers an interesting and economical alternative when it comes to obtaining high-resolution airborne pictures at an altitude of 10 to 500 m of areas ranging from 0.1 to 28 ha. The technique can be used almost anywhere at any time, making short-notice missions possible as long as the wind is blowing.



Anti-erosive measures on a hillside: stonewalls and planting pits for local tree species

An experimental millet field studying residual manure effects at ICRISAT, Sadoré, Niger



Millet field: the border between two fields as well as the difference in planting density is quit obvious

Eric Tielkes 2003. L'œil du cerf-volant: evaluation et suivi des états de surface par photographie aérienne sous cerf-volant. VIII + 116 pp. Margraf Verlag, Weikersheim, Germany. ISBN 3-8236-1406-1. €30.00 (http://www.margraf-verlag.de/1406.htm)

Apply Now for ITC's Short Courses 2005!

For mid-career professionals looking to further their knowledge of geo-information science and earth observation and its applications, ITC offers a range of short courses.

				Application deadlines	
Title	Starting date	Duration	Tuition fee	NFP Fellowship applicants	Non NFP
Advanced Application of Remote Sensing and GIS in Earth Resources and Environmental Geosciences	3 January 2005	6 weeks	Euro 1,500	1 September 2004	15 October 2004
Geo-information Infrastructure and Core Data Providers	3 January 2005	3 months	Euro 2,500	1 September 2004	15 September 2004
Planning and Coordination for Natural Resource Management	17 January 2005	10 weeks	Euro 2,500	1 September 2004	1 November 2004
Geo-information for Biodiversity Conservation	24 January 2005	9 weeks	Euro 2,000	1 September 2004	15 November 2004
Geo-information for Environmental Systems Analysis and Management	24 January 2005	9 weeks	Euro 2,000	1 September 2004	15 November 2004
Sustainable Agriculture and Geo-information Systems: Measuring the Immeasurable	24 January 2005	6 weeks	Euro 1,500	1 September 2004	15 November 2004
Geographical Information Systems for Urban Planning, Land Administration and Infrastructure Management	14 February 2005	7 weeks	Euro 2,000	1 September 2004	1 December 2004
GIS and Remote Sensing for Natural Hazard and Risk Assessment	14 February 2005	3 months	Euro 2,500	1 September 2004	1 December 2004
Modern Techniques in Groundwater Exploration and Management	14 February 2005	3 months	Euro 2,500	1 September 2004	1 December 2004
Remote Sensing and GIS Applications for Integrated Catchment and Water Management	14 February 2005	3 months	Euro 2,500	1 September 2004	1 December 2004
Sustainable Mineral Resource Exploration: Concepts and Tools	14 February 2005	3 months	Euro 2,500	1 September 2004	1 December 2004
Spatial Decision Support Systems and Multicriteria Evaluation Techniques	31 March 2005	4 weeks	Euro 1,500	1 November 2004	1 February 2005
Advanced Use of Remote Sensing in Water Resource Management, Irrigation and Drainage	4 April 2005	3 months	Euro 2,500	1 November 2004	1 February 2005

				Application deadlines	
Title	Starting date	Duration	Tuition fee	NFP Fellowship applicants	Non NFP
Creating Interactive and Dynamic Multimedia (Web) Maps	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Creating World Wide Web Sites for Spatial Data Dissemination	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Environmental Modelling with GIS and Remote Sensing	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Geographical Information System Development: Enterprise-Wide Spatial Database and Process Design	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
How Can GIS Be Successful in My Organisation? A People-Centred (or Socio-Technical) Approach to GIS	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Participatory GIS and Participatory Mapping for Spatial Planning: Applications to Resource Conflict Analysis	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Project Formulation and International Funding	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Remote Sensing-Based Monitoring of Continuous Processes and Discrete Events, with Focus on Vegetation and Disaster Applications	4 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Quantitative Assessment of Tree Resources outside Forests Using Remote Sensing, Geographical Information Systems and Field-Based Surveys	18 April 2005	4 weeks	Euro 1,500	1 November 2004	15 February 2005
Planning Support Systems: Scenario Development and Analysis	21 April 2005	4 weeks	Euro 1,500	1 November 2004	15 February 2005
Geo-information Project Management: How to Effectively Manage the Introduction and Use of GeoIT in an Organisational Setting	25 April 2005	3 weeks	Euro 1,000	1 November 2004	15 February 2005
Information System Development and Spatial Database Design	25 April 2005	3 weeks	Euro 1,000	1 November 2004	1 February 2005
Spatial Information for Environmental Impact Assessment and Strategic Environmental Assessment	25 April 2005	3 months	Euro 2,500	1 November 2004	15 February 2005

Title	Starting date	Duration	Tuition fee	Application deadlines NFP Fellowship applicants	Application deadlines Non NFP Fellowship applicants
Spatial Information from Active Sensors	25 April 2005	3 weeks	Euro 1,000	1 November 2004	15 February 2005
An Earth Science Field Study Project Using Digital Field Database Handling and Including Survey Planning, Execution, Analysis and Reporting	17 May 2005	3 months	Euro 3,700	1 November 2004	15 March 2005
Development of Organisations in a Geo-information Infrastructure Environment	17 May 2005	6 weeks	Euro 1,500	1 November 2004	15 March 2005
Conflict Management and Collaborative Spatial Decision Support Systems	14 July 2005	4 weeks	Euro 1,500	1 February 2005	1 May 2005
Advanced Concepts in Land Administration	18 July 2005	3 weeks	Euro 1,000	1 February 2005	1 May 2005
Diffusion and Effective Use of GIS within Organisations and Beyond: A People-Centred Approach	18 July 2005	3 weeks	Euro 1,000	1 February 2005	15 May 2005
Principles of Spatial Data Handling: Databases, GIS and Remote Sensing	3 October 2005	3 months	Euro 2,500	1 June 2005	1 August 2005
Principles and Applications of Remote Sensing and Geographical Information Systems	24 October 2005	9 weeks	Euro 2,000	1 June 2005	15 August 2005

Fellowships

The Netherlands Ministry of Foreign Affairs awards a number of fellowships annually under the Netherlands Fellowship Programme (NFP). For detailed information on NFP fellowships, please visit the NUFFIC website (www.nuffic.nl/nfp-npt).

More information

For more information about course content, the application process and other topics, please visit our website (www.itc.nl/education/programme_levels/short_courses).

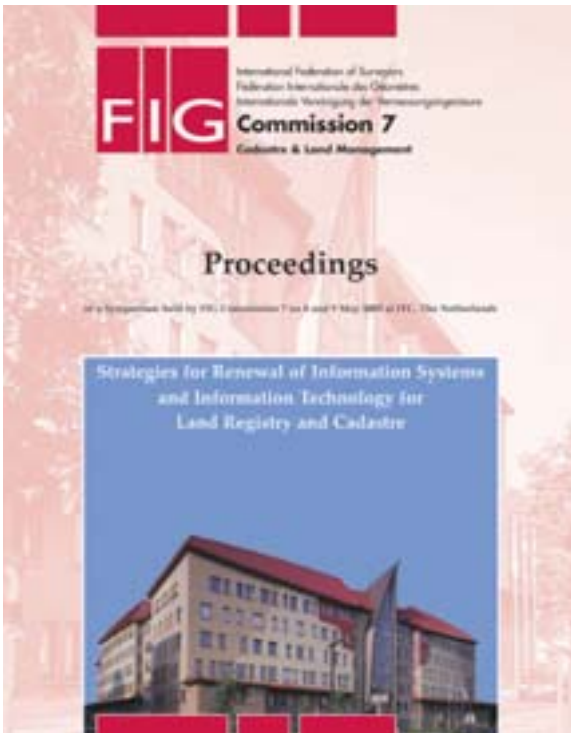
You can also contact the Short Course Coordinator at:
ITC
P.O. Box 6, 7500 AA Enschede, The Netherlands
Phone: +31-(0)53-487 44 44
Fax: +31-(0)53-487 42 38
E-mail: education@itc.nl

Symposium on IT Renewal Strategy for Land Registry and Cadastre

Paul van der Molen vandermolen@itc.nl
Christiaan Lemmen lemmen@itc.nl

In May last year a successful symposium on IT Renewal Strategies for Land Registry and Cadastre was held at ITC *(see ITC News 2003-2)*. The proceedings of this symposium are now available. Covering 12 European countries, an overview is given of IT renewal strategies being developed and implemented by land registry and/or cadastral organisations that started computerising their systems more than 20 years ago.
Approaches are presented, taking a look behind the scenes. Each paper reviews the cadastre and land registry system, the existing ICT situation, the reasons and goals for renewal (user demands), and the related strategies. Depending on the particular situation, other aspects too come under scrutiny, such as external and internal analyses of the environment, alternative scenarios, evaluation criteria, alternative mechanisms, lessons learnt, ICT impact, electronic services, GDI and organisational consequences.

As announced earlier, the papers and PowerPoint presentations can be accessed at www.oicrf.org. If you are interested, you can request a hard copy of the proceedings by contacting Ms Pauline van Elsland at the Netherlands Cadastre, Land Registry and Mapping Agency (Pauline.vanElsland@kadaster.nl).



The proceedings of the symposium on IT Renewal Strategies for Land Registry and Cadastre are now available

staff news

Welcome to ITC	Valentyn Tolpekin	Lecturer, Department of Earth Observation Science (per 1 January 2004)
	Dr Andreas Wytzisk	Assistant Professor, Department of Geo-information Processing (per 1 January 2004)
	Drs Daniel Jager	Research Assistant, Department of Water Resources (per 1 February 2004)
	Prof. Dr. Douglas Webster	Chairman, Department of Urban and Regional Planning and Geo-Information Management (per 1 February 2004)
	Tom Rientjes	Lecturer, Department of Water Resources (per 1 March 2004)
Staff leaving	Joanne Hyde	Scientific Assistant, Department of Natural Resources (per 1 February 2004)
	Hans Hoschtitzky, Dipl.-Ing.	Lecturer, Department of Earth Observation Science (per 1 February 2004)
	Dr Herman Huizing	Associate Professor, Department of Natural Resources (per 1 March 2004)

research news

Research Feedback Workshop – Nizamabad District, India

Uday Bhaskar Nidumolu uday@itc.nl
Karl Harmsen harmsen@itc.nl

ITC is sponsoring PhD research by Uday Nidumolu. It deals with participatory land use planning in India, with a case study of Nizamabad District in the state of Andhra Pradesh.
The team supervising this research is composed of Professor Andrew Skidmore (ITC/Wageningen University), Professor Herman van Keulen (Wageningen University), Professor Karl Harmsen (ITC/ CSSTEAP) and Dr Kees de Bie (ITC), and is supported by the National Remote Sensing Agency, Hyderabad, and the District Administration of Nizamabad.

The focus of the current research is to integrate stakeholder interests with biophysical data in order to generate land use policy options. The research builds on an existing large-scale geo-information project for land use planning, which is operational over some 83 million ha (covering 25% of India). GIS and image processing techniques, statistical analysis, multiple goal linear programming, stakeholder analysis and participatory rural appraisal have been used to achieve the research objectives. Fieldwork of several months was conducted in some 40 villages in the study area during the years 2002-3. The research work has been made more relevant through the excellent cooperation of the District Administration and the enthusiastic participation of the field-level officials and farmers. Among the research topics completed so far are:

- reviewing an existing land use planning programme using the soft systems methodology
- an approach to identify land use planning objectives
- yield gap modelling, applying comparative performance analysis techniques
- multiple goal optimisation modelling and its integration with an inter-stakeholder communication matrix
- fuzzy modelling of farmers' views of land suitability.

A few more topics related to the research are under development.

With the aim of understanding the usefulness of the research to the target audience (i.e. district-level land and water management officials and farmers), a workshop was organised in the study area in January 2004. Results of the topics mentioned above were presented. The District Administration, led by the district collector and the project director of the District Rural Development Agency, supported the workshop with the necessary logistics. The workshop was held in the state-of-the art conference hall, with attendant facilities, of the District Rural Development Agency's office in Nizamabad District. The participants in the day-long research feedback workshop included small-scale and marginal farmers, large-scale farmers, water user associations, field-level agricultural extension officers, district-level agricultural officers, and the project director of the land and water management for the district - in all 25 participants drawn from various parts of the study area. Some workshop participants had also taken part during the fieldwork phases of the research.

Workshop participants

After a brief introduction to the research, a detailed presentation of each of the topics was made in the local language and dialect (Telugu and Telangana). The presentation was made in order to engage the diverse audience, and the challenge was to convey a message that had to be both simple enough to reach the small farmer and technical enough to sustain the interest of the extension and agricultural officers. We can say we responded to the challenge successfully, as all the participants continued right the way through till the

Discussion, model validation, and feedback from users in Nizamabad District, Andhra Pradesh, on 17 January 2004 Nizamabad District, Andhra Pradesh State

Meeting with the Honourable Minister for Agriculture, Government of Andhra Pradesh (centre)

end of the workshop! The participants were encouraged to ask questions, express opinions and make comments either during or after the presentation. There was enthusiastic involvement, with the participants keenly following the presentation (one participant requested a detailed explanation of the word "degradation", which appeared in the slides). They made comments that were sometimes quite frank, agreed with the results or wanted more clarification, and contributed from their own knowledge of the methods adopted. There were many questions and comments from the stakeholders regarding the research work, which helped us to draw some useful conclusions and also fine-tune some areas of the work.

To summarise, the workshop was well attended; there was enthusiastic participation, as well as feedback on the results; there was a demand for the research area to be extended (spatially) into other administrative areas; and there was also a demand from the local administrators for a copy of the software developed to generate scenarios. Looks promising!

Prior to the workshop, a presentation of the current research was made to the Honourable Minister for Agriculture of Andhra Pradesh, Shri V. Sobhandreeswara Rao, in Hyderabad, the capital of Andhra Pradesh. The Minister, who is an engineer by profession and a keen agriculturalist, spent several hours reviewing the research and showed an active interest in the methods adopted and the results obtained so far. He also made useful observations and outlined several issues of practical importance concerning the land use planning programme. The interaction turned out to be very useful indeed.

project news

Special Course for Makarere University, Uganda

Tom Loran loran@itc.nl

Makarere University in Kampala is one of the oldest universities in Central and Sub-Saharan Africa. First established in 1922 as a technical school, the institution has developed into a large university that today hosts 20 faculties and institutes and offers educational programmes to approximately 25,000 students. This makes it one of the largest educational and scientific institutions in Central and Eastern Africa.

At the request of the Geography Department of Makarere University, a tailor-made training programme has been implemented, entitled "Special Training in GIS and Remote Sensing Applications for Natural Resources

Management and Physical Planning". The first part of the course, presented jointly by staff from UCLAS (Dar es Salaam) and ITC, was held in Kampala last year (see *ITC News 2003-1*); the second part was conducted at ITC in August and September 2003; and a follow-up visit by ITC's Joan Looijen to the staff of the Geography Department took place in December.

During their stay at ITC, staff from the Geography Department were introduced to technical matters related to the application of GIS and remote sensing techniques. They were also introduced - perhaps more importantly - to the concepts and principles of course design, and curriculum review and development, as well as to didactic skills that would promote more effective learning and understanding. The course at ITC ran from 11 August to 19 September and was attended by 15 staff from Kampala. It was the attention to educational concepts that distinguished this course from other similar short courses at ITC. Since many ITC course participants come from educational institutions, it is becoming increasingly important to handle not only technical issues but also new teaching methods.

Directly on the return of the course participants to the university in Kampala, the Geography Department embarked on a full-scale review of its postgraduate curriculum. Consequently, staff could immediately use the knowledge and skills they had obtained during the course at ITC. The follow-up visit by ITC staff to Kampala was also used to this end. Assistance was given in the process of curriculum review, as well as in further developing course materials and case studies and incorporating these into the regular curriculum.

The course, which was considered a great success, heralds the start of a long-term relationship with Makarere University. As part of the cooperation with ITC, a refresher course entitled "Geo-Informatics for Watershed Management" will be given by the Geography Department in Kampala this coming October.

The official announcement and further information on the refresher course can be found at http://www.itc.nl/alumni/refresher_courses/2004/uganda.asp.

Global Urban Observatory (GUO)

Tom Loran loran@itc.nl

The United Nations Human Settlements Programme (UN-HABITAT in short) is the UN Agency for Human Settlements. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities so as to provide adequate shelter for all people.
Following up on a decision by the United Nations Commission on Human Settlements that called for a mechanism to monitor global progress in implementing the Habitat Agenda (http://www.unhabitat.org/unchs/english/hagenda/) and to monitor and evaluate global urban conditions and trends, UN-HABITAT established the Global Urban Observatory (GUO).

The GUO was established to help local and national authorities to gain quick and easy access to information for policy making and monitoring purposes. Its aim is to improve the capacity of countries and cities to design their data requirements on urban issues, to access relevant information, and to use this information for policy design and monitoring. The GUO has two main functions: to monitor urban development worldwide and to support the use of urban information for local policy formulation. One of the programme components is to provide GIS technology and training to enable cities to update and map information about infrastructure, housing, and social, economic and environmental conditions.

Experience shows that many cities lack accurate and up-to-date spatial data on these issues, and to remedy this situation the GUO has initiated the 1000 Cities GIS Program. This programme helps cities in developing countries to better manage information in order to meet the needs of different urban actors such as local authorities and organisations working particularly for poor communities.

Jan Turkstra, ITC staff member of the Department of Urban and Regional Planning and Geo-information Management (PGM), has been seconded to the UN-Habitat Global Urban Observatory to assist in developing training modules, to conduct training courses, and to provide general GIS support for the project.

Websites:

http://www.unhabitat.org/programmes/guo/
(Global Urban Observatory)

http://www.unhabitat.org/guonet/gis.asp
(1000 Cities Program)

Kiambio slum in Nairobi

The 1000 Cities Project:

UN-HABITAT and ESRI signed a Memorandum of Understanding early 2003, to distribute 1000 software copies to applicants from developing countries. The aim of the cooperation between UN Habitat and ESRI is to provide GIS technology and training to up to 1000 cities in developing countries so that they can participate in the collection of urban indicator information. Urban indicators include information about poverty, environmental degradation, lack of urban services, degeneration of existing urban infrastructure, and the lack of access to land and adequate shelter. Cities can use GIS for the collection and analysis of urban indicator data to facilitate better urban management and the formulation of participatory development policies.

Under the 1000 Cities Program, interested organizations that work with city level data can apply for a GIS software package.

For more information you can look at the UN-HABITAT website http://www.unhabitat.org/guonet/Criteria.asp (Criteria for ESRI Grant Recipients), or contact:

Mr. Martin Raithelhuber
Global Urban Observatory
Monitoring Systems Branch, UN-HABITAT
P.O. Box 30030, Nairobi 00100, Kenya
Tel: 254-20-623665
Fax: 254-20-623080
E-mail: guo@unhabitat.org

Development of a Technical Study Programme in Land Administration in Guatemala

Sabine Maresch maresch@itc.nl

On March 12, ITC's Director External Affairs Sjaak Beerens visited the Faculty of Agronomy at the University of San Carlos (FAUSAC) in Guatemala City, Guatemala. In a formal ceremony, Mr Beerens and Dr Ariel Abderraman Ortíz López, the dean of FAUSAC, signed a contract for the joint implementation of a three-year project entitled "Development of a Technical Study Programme in Land Administration in Guatemala".

The project is being financed through the Netherlands Programme for Institutional Strengthening of Post-secondary Education and Training Capacity (NPT). The NPT is the successor of the earlier SAIL and MHO programmes and is being administered by the Netherlands Organization for International Cooperation in Higher Education (NUFFIC). The FAUSAC-ITC land administration project was the first project to be approved under the new NPT programme.

ITC is the lead partner in this project; other subcontracted partners are Kadaster, the Maastricht School of Management, and DHV Agriculture and Natural Resources bv. Implementation of the project has already started; it kicked off with a workshop in Guatemala in February this year (see photograph). Staff from ITC and FAUSAC were among the participants. The project aims to develop educational and research capacity in land administration at FAUSAC. The most important output

is the development of a three-year technical programme (*carrera técnica*) in land administration at BSc level. The first year of this programme will start in 2006. Other project activities will focus on staff development, improving facilities and developing a research programme. This will be carried out in cooperation with, and based on the requirements of, Guatemalan land administration user organisations (e.g. the National Mapping Organisation, the National Registry, and the Juridical and National Unit UTJ/Protierra). These organisations will be formed into a Land Administration Users Group (LAUG), which will advise the project team on the needs and requirements of the new educational and research programmes.

The new graduates of the *carrera technica* will be able to provide support in land administration processes, taking into account the socio-economic characteristics of the various communities and with a view to supporting social stability in the 331 municipalities of the country.

Thus the main outputs of the project will be:

- a curriculum for a three-year technical university degree programme in land administration at FAUSAC and three of its satellite campuses, implementation to start in 2006
- 80 trained and specialised staff at FAUSAC and its satellite campuses
- four fully equipped laboratories at FAUSAC and its satellite campuses
- a research programme up and running
- a functional network of land administration users organised in a Land Administration Users Group (LAUG) to give continuous advice and support to capacity building in land administration in Guatemala.

For more information on this project, please contact Project Supervisor Dr Yola Georgiadou (Department of Urban and Regional Planning and Geo-information Management, georgiadou@itc.nl), Project Manager Sabine Maresch (Bureau Project Services, maresch@itc.nl), or FAUSAC Project Supervisor Dr Edgar Franco in Guatemala (efranco@fausac.edu.gt). More information on NPT can be found at www.nuffic.nl/nfp-npt.

Closing Workshop CASITA Project

Cees van Westen westen@itc.nl
Sabine Maresch maresch@itc.nl

As part of the Asia IT&C programme of the European Commission (EC), which aims at intensifying cooperation between Europe and Asia in the field of information technology and communication, ITC launched the project Capacity Building in Asia Using Information Technology Applications (CASITA).
The project aimed to support capacity building in the use of modern disaster mitigation tools, targeted at reducing the disaster vulnerability of urban regions in Asia. The project provided support for the institutionalisation of academic courses on disaster mitigation in existing urban planning and geography curricula at university level. To support knowledge sharing cost-effectively, an Internet-based platform for e-learning has been developed. The project objectives were to:

- establish a network of universities and training institutes in Asia that implement courses on disaster management in their course curriculum
- introduce the application of GIS and remote sensing in disaster management in the form of a number of case studies to be shared among the participants
- provide the participating universities with resource materials for developing courses and case studies, making use of an Internet-based platform (Blackboard).

The project was carried out by ITC staff Cees van Westen, Sabine Maresch, Dinand Alkema and Paul Hofstee, together with N.M.S.I Arambepola, Rajesh Sharma and Clarence Carlos from the Asian Disaster Preparedness Center (ADPC), located on the AIT campus in Bangkok, Thailand, and Pascal Barbier and Laurent Dalencon from ENSG (Ecole National de Sciences Géographiques), France.

In the context of this project, a two-week train-the-trainers workshop was held from 11 to 22 August 2003 in the AIT Conference Center in Bangkok and was attended by 25 teaching staff from 14 universities and training institutes in Asia. Since this workshop, the university staff have developed GIS case studies dealing with hazard and risk assessment in their own countries. All universities have also designed curricula for courses on disaster management, and more than half of the participating universities have already implemented their courses.

Project results were presented during a four-day closing workshop attended by 18 teaching staff from 14 universit°ies and training institutes in Asia

The results of the project were presented during a four-day closing workshop, which was held from 16 to 19 March at the Indian Institute of Remote Sensing, Dehradun, India. The workshop was attended by 18 teaching staff from 14 universities and training institutes in Asia. Below is a list of the case studies presented.

Bangladesh
- Bangladesh University of Engineering and Technology, Bangladesh. Contact person: Dr K.M. Maniruzzaman (mzaman@urp.buet.ac.bd). Case study: Use of GIS for earthquake loss estimation for the city of Rajshahi, northern Bangladesh.
- Khulna University, Bangladesh (not present). Contact person: Mr Akhter Hossain Chaudhury (3wnet@bdonline.com). Case study: Use of GIS for flood risk assessment for an area along the Rupsha River.

India
- Centre for Environmental Planning and Technology, Ahmedabad, India. Contact person: Ms Madhu Bharti (madhubharti@cept.ac.in). Case study: Use of radius for earthquake loss estimation for the city of Ahmedabad.
- Indian Institute of Remote Sensing, Dehradun, India (one person). Contact person: Mr V. Hari Prasad (prasad@iirs.gov.in). Case study: Earthquake loss estimation for the city of Dehradun.

Indonesia
- Institut Tecknologi, Bandung (ITB), Indonesia. Contact person: Ridwan Sutriadi (ridwan301@plasa.com). Case study: Use of GIS for development planning in north Bandung.
- Gadjah Mada University, Indonesia. Contact person: Dr H.A. Sudibyakto (sudibyakto@geo.ugm.ac.id). Case study: GIS modelling for landslide hazard and risk assessment: a case study of the Kulon Progo mountainous area, Yogyakarta, Indonesia.

Lao PDR
- Urban Research Institute, Lao. Contact person: Mr Vongsack Mixay (urilao@laotel.com). Case study: Urban fire risk assessment for the city of Vientiane.

Nepal
- Kathmandu University, Nepal. Contact person: Dr Roshan Bajracharya (rmbajra@yahoo.co.uk). Case study: Use of radius for earthquake loss estimation in Banepa, Nepal.

Pakistan
- University of Peshawar, Pakistan (two people, and very expensive!). Contact person: Professor Syed Hamidullah (hamidu@brain.net.pk). Case study: Flood hazard and risk assessment for the city of Muzeraffabad, Pakistan.

Philippines
- University of Philippines. Contact person: Professor Alex Ramon Q. Cabanilla (arqcab@hotmail.com). Case study: Use of GIS for evaluating mitigation strategies in a (hypothetical) flood-prone municipality.

Sri Lanka
- University of Ruhuna, Sri Lanka. Contact person: Professor Premadasa Liyana Arachchi (plarachchi@sltnet.lk). Case study: Flood hazard and risk assessment for the Ratnapura area, Sri Lanka.
- University of Moratuwa, Sri Lanka. Contact person: Dr P.K.S. Mahanama (senavi@sltnet.lk). Case study: Flood risk assessment for a part of Colombo.

Thailand
- Chiang Mai University, Thailand. Contact person: Dr Chira Prangkio (prangchi@hotmail.com). Case study: Landslide hazard and risk assessment for Phayao province, north Thailand.
- Asian Institute of Technology, Bangkok, Thailand. Contact person: Rajendra Prasad Shrestha (rajendra@ait.ac.th).

Vietnam
- Hanoi Architectural University, Vietnam. Contact person: Mr Nguyen Cong Hung (hungnc@s.vnn.vn). Case study: Urban flood risk assessment, Nahoi city.

The response from the universities was very positive. Most of them have indeed developed GIS case studies within the framework of the project,

and most have also developed course curricula on disaster management. The project received a positive evaluation, and all universities indicated a wish to continue in the network. Furthermore, it was felt that in future emphasis should be given to quality assurance (e.g. through peer review of case studies and course materials), exchange of staff, and joint research. According to the university staff, the use of the Internet for sharing course materials is still limited, and most of them indicated that generally speaking their Internet connections at the universities were not yet sufficient to use Blackboard extensively. They did use the materials provided on CDs during the initial training course in Bangkok, and most of them have also used ILWIS, which they consider to be an excellent tool and one they would like to continue using in their teaching. At the end of the course, all participants received a CD-ROM with the lecture and practical materials (also available on the CASITA Blackboard site), as well as a CD-ROM with the PowerPoint presentations, GIS case study descriptions and GIS materials from the participating universities.

Although the funding from the EC Asia IT&C programme for the CASITA project is ending in April 2004, the universities have decided to continue the network jointly with ITC, ADPC and ENSG, and to look for additional funding opportunities to maintain the network in the future.

The contacts with the universities will be further maintained though a Blackboard site, which features all course materials and where the case studies from the participating universities are shared. This Blackboard site can be reached at http://bb.itc.nl (select ITC community, ITC projects, CASITA).

More information on the Asia IT&C CASITA project can be found at http://www.adpc.net/casita/Prog.html.

Any university that would like to join the CASITA network should contact Cees van Westen (westen@itc.nl) or Rajesh Sharma (rajesh@adpc.net)

Group before dinner

Training Course on Using GIS and Remote Sensing for Coastal Zone Management in Indonesia

Tom Loran loran@itc.nl

Almost 80% of the world's population lives within 100 km of a coastline. Increased pressure on this narrow strip of land will result in increased degradation of the coastal environment. Land resource managers in these densely populated areas are facing complicated problems related to pollution, erosion, flooding, salt intrusion and land subsidence. On the seaward side of the coastline, this is complicated even further by problems related to the degradation of coral reefs, mangrove forests, etc.

The integrated management of the complex problems in the coastal zone can be helped tremendously by applying such technological tools as geographical information systems, remote sensing and modelling. Especially in the Southeast Asian region (and particularly in Indonesia), coastal zone management has always been a very important subject. SEAMEO BIOTROP, the Southeast Asian Regional Centre for Tropical Biology, is one of the 15 centres under SEAMEO (Southeast Asian Ministers of Education Organization).

The organisation consists of 10 member countries, namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.
SEAMEO BIOTROP is based in Bogor, Indonesia, where it was established in 1968. Originally located in the famed

Botanical Garden, it moved in 1978 to its present site on the edge of the city. Its activities cover research, training, workshops, symposia, publications, consulting and other services (laboratory analysis and renting facilities). Besides a range of short courses and training workshops, BIOTROP is offering a Master of Science degree course in Information Technology for Natural Resources Management. Within this MSc training programme, BIOTROP is now planning to conduct a short training course on the use of GIS and remote sensing for coastal zone management. ITC experts will work alongside BIOTROP staff in preparing and implementing the course, and the course is scheduled to take place in Bogor, Indonesia, from 12 to 30 July this year. The aim of the course is to provide participants with the opportunity to acquire skills and become acquainted with new developments in the field of data acquisition, data analysis and management with respect to coastal zones, using GIS and remote sensing.

SEAMEO Biotrop Campus in Bogor, Indonesia

For more information, please contact:
Dr Tania June, MIT Programme Coordinator (taniajune@biotrop.org)
or Drs Tom Loran, ITC Project Officer (loran@itc.nl)

Expertise Network for Spatial Planning and Decision Support Methods: Successful Inception Meeting of the AUNP Project

Lyande Eelderink eelderink@itc.nl
Luc Boerboom boerboom@itc.nl

During the inception meeting of the Expertise Network for Spatial Planning and Decision Support (26 January to 6 February 2004), network members from 12 academic and public sector organisations and private sector consultants examined the need for short-course curricula on spatial planning and decision support systems for mid-career professionals. These executive and technical courses are to be developed and implemented in the coming two years in Malaysia, the Philippines, Italy and the Netherlands.

The aim of this project initiated by ITC is to strengthen participating universities by improving their training programmes in the field of urban and regional planning and governance. The ITC department involved in the project is the Department of Urban and Regional Planning and Geo-information Management, and the universities concerned are:

- University of Trento in Italy (Department of Civil and Environmental Engineering)
- International Islamic University Malaysia (Department of Urban and Regional Planning and Department of Economics and Management)
- University of the Philippines (National College for Public Administration and Governance).

The aim of the project initiated by ITC is to strengthen participating universities by improving their training programmes in the field of urban and regional planning and governance

The project is being funded by the ASEAN-EU University Network Programme (AUNP), which was launched in January 2000 as a six-year programme with a total budget of €7,767,500. This initiative by the European Union (EU) and the ASEAN University Network (AUN) aims to enhance cooperation between higher education institutions in the two regions, promote regional integration within ASEAN countries, and strengthen the mutual awareness of European and Asian cultural perspectives.

life after itc

Alumni Meetings in Guatemala and Mexico

ITC News itcnews@itc.nl

During the visit in March this year of Sjaak Beerens, director external affairs, alumni meetings were organised in Guatemala City and Mexico City.

While in Guatemala, Sjaak Beerens met with three alumni. One was Marco Antonio Aceituno Sotomayor, who studied under ITC's founding father, Professor Schermerhorn, and graduated from ITC in 1964. The other two alumni, Mynor Roberto Garcia Abal and Hector Solis Cuellar, were students of more recent date and graduated from ITC in 2001. Both are making impressive progress in their careers, having already been promoted to the level of departmental director.

Only three out of a total of 19 registered alumni in Guatemala attended the meeting. This small number highlighted a major problem we face: incorrect or missing address details in our alumni database. It was agreed that all alumni for whom we have addresses would embark on a search for their "lost" comrades. Marco Antonio responded quickly by identifying three "missing alumni" from the telephone directory.

Alumni from Guatemala: (left to right) Mynor Roberto Garcia Abal, Hector Solis Cuellar and Marco Antonio Aceituno Sotomayor

ITC alumni in Mexico City

The alumni meeting in Mexico City was attended by 14 alumni, including two originally from Colombia and one from China (Yang Gao, who met her husband at ITC). Keeping track of correct addresses is a problem in Mexico as well. One of the alumni, Alejandro Velasquez Montes (avmontes@igiris.igeograf.unam.mx), has volunteered to start updating alumni records. With over 80 alumni in Mexico, that's a major task!

Alumni Gatherings 2004

During First International Workshop on Land Cover Study of Mongolia Using RS/GIS,
Ulaan Baatar, Mongolia.
Between 8-10 June 2004

During ESRI User Conference, San Diego, USA
Between 9-13 August 2004

During ISPRS Congress, Istanbul, Turkey
20 July 2004

During 5th AARSE Conference, Nairobi, Kenya
20 October 2004

Are you an ITC alumna/alumnus and would you like to join in one or more alumni gatherings?

Send an e-mail to alumni@itc.nl and we'll send you the invitation.

or

Visit our booth at ESRI, ISPRS and/or AARSE on the first conference day and pick up your invitation.

Greetings from Burkina Faso!

Ineke and Jan Vervoort ir.vervoort@planet.nl

Warm greetings from the ITC alumni in Burkina Faso! Do you still remember them?

André Roch Compaoré, who studied at ITC around 1976, or Sibiri Koudougou? In the photo you can see (from left to right): Zowinde Koudougou, Ousman Diallo, T. Sanou, Michel Lofo, André Bassolé, Thomas Yili, Dr Laurent Sedogo, André Roch Compaoré, Hamidou Tiendrebeogo, Dr Seraphine Kaboré, Dominique Kissou and, sitting, Sibiri Koudougou, Joseph Ilboudo and Jean Abdias Compaoré. Jean Simpore, who's not in the photo, also sends his best wishes to everyone.

From left to right: Zowinde Koudougou, Ousman Diallo, T. Sanou, Michel Lofo, André Bassolé, Thomas Yili, Dr Laurent Sedogo, André Roch Compaoré, Hamidou Tiendrebeogo, Dr Seraphine Kaboré, Dominique Kissou and, sitting, Sibiri Koudougou, Joseph Ilboudo and Jean Abdias Compaoré

This photo was taken in January 2004 when we (Ineke and Jan Vervoort) were again in Burkina Faso, a country with which we have a special relationship. If a country means a great deal to you, it's usually because of the relationship you have with the people. We've visited a large number of former ITC students that we got to know in Enschede. That's how we arrived in Africa for the first time in 1989 – in Mali and Burkina Faso - via Nouh Sow and Gaoussou Coulibaly. When later at ITC we met up with students from Burkina Faso, it was great for all of us: you have something in common. Over the years we've spent many happy hours in our home with all the ITC students hailing from Burkina Faso.

Through these talks and repeated visits to Burkina Faso, we've become more and more involved with the life out there. You arrive at a small place in the country, visit the local primary school and see the meagre teaching materials, but you also see the enthusiasm of the teachers. We wanted to help and that's why we've set up the Hakuna Matata Foundation. In the meantime, we've been trying to arrange something with people and institutions that are interested, not only in Burkina Faso but also in Mali and Cameroon.

This time our stay in Burkina was very special. We went there to get official permission to set up a lower technical school in Boulsa. After the necessary talks with the authorities concerned we did indeed obtain this permission. And we're very happy about it!

There's another reason that made this visit so exceptional. When we were away in the field, a message reached us that our friend Laurent Sedogo, who obtained his PhD at ITC about a year and a half ago, had been appointed Minister for the Environment and Living Standards. A great honour, and also for ITC, which had contributed so much to his development. After his graduation, Dr Laurent Sedogo was among those who played a significant part in the success of the big international CILLS congress in Bamako in 2003. We're convinced that, as minister in charge of environmental issues, Dr Laurent Sedogo can and will come to mean a great deal to his country.

Dr Laurent Sedogo, ITC alumnus, appointed Minister for the Environment and Living Standards in Burkina Faso

letter to the editor

Dear Editor of ITC News,

I am indeed very happy to be reunited once again with the ITC family through the ITC News. I graduated from ITC in 1975 after going through the then C3 programme (Cartographic Engineering). I was kept in the know regarding the research going on at ITC through the ITC Journal. However, I stopped getting the Journal in 1978. Presently I am an associate professor in the Department of Geography at the Federal University of Technology, Minna, and I'm also the president of the Nigerian Cartographic Association. I shall forever cherish the training received at ITC many years ago. I'd like to have the opportunity of a homecoming for a few months, for a refresher course on the modern technology with which ITC is keeping pace. The quality of ITC News is great. Please keep up the good work. I appreciate ITC and will forever remain grateful to the Institute for showing me the way.

Dr Godwin N. Nsofor
Federal University of Technology, NIGERIA *nsoforgn50@yahoo.com*

Alumni associations

The mission of the Netherlands Alumni Associations (NAAs) and the ITC alumni associations is to enable people all over the world who have studied in the Netherlands or at ITC in particular to build personal networks and share knowledge, ideas and experience with one another and their Dutch counterparts. Alumni who would like to set up similar associations in their own country can contact ITC.
For more information and an overview of Alumni organisations, please visit www.itc/alumni

CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR CALENDAR

CONFERENCE CALENDAR

Geoinformatics 2004
07 June 2004 - 09 June 2004
Sweden, Gävle
http://www.hig.se/geoinformatics/
geoinformatics@hig.se

EOGEO 2004
23 June 2004 - 25 June 2004
United Kingdom, London
http://eogeo.net
adoyle@eogeo.org

EARMA Annual Conference
24 June 2004 - 26 June 2004
Romania, Bucharest
http://www.earma2004.ro
info@earma2004.ro

First International Conference on Geoparks
27 June 2004 - 29 June 2004
China, Beijing
http://www.cags.net.cn/Geoparks
dic@cags.net.cn

GI-Days 2004
01 July 2004 - 02 July 2004
Germany, Muenster
http://www.gi-tage.de
info@gi-tage.de

Workshop on E-learning (during GI-Days)
01 July 2004 - 02 July 2004
Germany, Muenster
http://www.gi-tage.de
info@gi-tage.de

5th Joint ICA/ISPRS/EuroGeographics Workshop

12 July 2004 - 14 July 2004
Turkey, Istanbul

http://geo.haifa.ac.il/~icaupdt/meetings/meetings.htm

20th ISPRS Congress

12 July 2004 - 23 July 2004
Turkey, Istanbul

http://www.isprs2004-istanbul.com
oaltan@srv.ins.itu.edu.tr
ITC attendance: Lyande Eelderink, Mark Noort (ITC booth); Marianne Assink, Klaas Jan Beek, Sjaak Beerens, Kees de Bie, Theo Bouloucos, John van Genderen, Karl Grabmaier, Yousif Hussin, Martien Molenaar, Javier Morales, Sokhon Phem, Mostafa Radwan, Massoud Sharif, Ali Sharifi, Andrew Skidmore, Alfrein Stein, Saskia Tempelman, Klaus Tempfli, Valentyn Tolpekin, Valentijn Venus, Tsehaie Woldai

35th COSPAR Scientific Assembly

18 July 2004 - 25 July 2004
France, Paris

http://www.cospar2004.org/
cospar2004@colloquium.fr

PPGIS

18 July 2004 - 20 July 2004
United States, Madison

http://www.urisa.org/ppgis.htm
info@urisa.org

RMCI 2004

18 July 2004 - 21 July 2004
United States, Orlando

http://www.confinf.org/rmci04/
rmci04@confinf.org

CMSC 2004

19 July 2004 - 23 July 2004
United States, San Jose

http://www.cmsc.org/
chairman@cmsc.org

IA Summer School: Integrated Assessment for Environmental Management

25 July 2004 - 31 July 2004
Germany, Osnabrück

http://www.tias-web.info/
cvbers@usf.uos.de

III LBS Scientific Conference

26 July 2004 - 28 July 2004
Brazil, Brasilia

http://www.lbaconferencia.org/eng/index.htm
brasilia_committee@mail.lbaconferencia.org

15th International Symposium on Earth Tides

02 August 2004 - 06 August 2004
Canada, Ottawa

http://www.yorku.ca/ets/ets.html
mastroh@ucalgary.ca

ESRI International User Conference

09 August 2004 - 13 August 2004
United States, San Diego

http://www.esri.com/events/uc/index.html
ucregis@esri.com
ITC attendance: Lyande Eelderink, Mark Noort (ITC booth); Rolf de By, Jan Turkstra

International Workshop on Geographic Hypermedia

09 August 2004 - 13 August 2004
United States, Santa Cruz

http://www.ht04.org/workshops/GeographicHypermedia/index.php
enquiries@ht04.org

30th Congress of the International Geographical Union

15 August 2004 - 20 August 2004
United Kingdom, Glasgow

http://www.meetingmakers.co.uk/igc-uk2004/index.html
igc2004@meetingmakers.co.uk

ITALIA 2004, International Geological Congress # 32

20 August 2004 - 28 August 2004
Italy, Florence

http://www.32igc.org
ITC attendance: Sabine Maresch, Phil Westerhof (ITC booth)

World Library and Information Congress: 70th IFLA General Conference and Council

22 August 2004 - 27 August 2004
Argentina, Buenos Aires

http://www.ifla.org/IV/ifla70/index.htm
ifla2004secr@el-libro.com.ar
ITC attendance: Marga Koelen

SDH 2004

23 August 2004 - 25 August 2004
United Kingdom, Leicester

http://www.geog.le.ac.uk/sdh2004/
pff1@le.ac.uk
ITC attendance: Rolf de By, Richard Knippers, Menno-Jan Kraak, Jantien Stoter

EuroScience Open Forum 2004

25 August 2004 - 28 August 2004
Sweden, Stockholm

http://www.esof2004.org/
info@esof2004.org

Map Asia 2004 (rescheduled dates!)

26 August 2004 - 29 August 2004
China, Beijing

http://www.mapasia.org/
info@mapasia.org

URISA's Sixth Annual URISA's Sixth Annual GIS in Addressing Conference

29 August 2004 - 01 September 2004
United States, St. Louis, Missouri

http://www.urisa.org/address.htm
sgrams@urisa.org

Governance for Urban Change

05 September 2004 - 08 September 2004
Norway, Oslo

http://www.ifhp2004oslo.no
congress@ifhp.org

Remote Sensing and Photogrammetry Society Annual Conference

07 September 2004 - 10 September 2004
United Kingdom, Aberdeen

http://www.rspsoc.org/
rspsoc@nottingham.ac.uk

RSPSoc 2004 Annual Conference

07 September 2004 - 10 September 2004
United Kingdom, Aberdeen

http://www.rspsoc.org/
rspsoc@nottingham.ac.uk

SVG.Open 2004

07 September 2004 - 10 September 2004
Japan, Tokyo

http://www.svgopen.org/2004/call_en.html
SVGOpen2004@yahoogroups.com

GIS - GRASS Users Conference

12 September 2004 - 14 September 2004
Thailand, Bangkok

http://gisws.media.osaka-cu.ac.jp/grass04/
grass04_office@gisws.media.osaka-cu.ac.jp

GIS-IDEAS 2004

16 September 2004 - 18 September 2004
Vietnam, Hanoi

http://gisws.media.osaka-cu.ac.jp/gisideas04/
gisideas2004@pmail.vnn.vn

GARSS 2004

20 September 2004 - 24 September 2004
United States, Anchorage

http://www.igarss04.org

ISG 2004

21 September 2004 - 23 September 2004
Malaysia, Kuala Lumpur

http://www.itma.upm.edu.my/isg2004

3rd workshop of the EARSeL - SIG on Remote Sensing for Developing Countries

26 September 2004 - 29 September 2004
Egypt, Cairo

http://www.geoweb.ugent.be/earsel/
earsel@meteo.fr

14th International Symposium on Remote Sensing and Development

27 September 2004 - 30 September 2004
Syria, Damascus

http://www.gors-syr.org
gors@mail.sy

GIS 2004

27 September 2004 - 29 September 2004
Bahrain, Manama

http://www.engineer-bh.com/gis3/

Waste 2004

28 September 2004 - 30 September 2004
United Kingdom, Stratford-upon-Avond

http://www.waste2004.com/
info@waste2004.com

GeoSolutions 2004

29 September 2004 - 30 September 2004
United Kingdom, Birmingham

http://www.geosolutions-expo.com
sweller@cmpinformation.com

Conference on Laser Scanner Application for Landscape Assessment

03 October 2004 - 06 October 2004
Germany, Freiburg

http://www.natscan.de/conference/
Michael.Thies@iww.uni-freiburg.de

FIG Regional Conference for Asia and the Pacific

03 October 2004 - 07 October 2004
Indonesia, Jakarta

http://www.fig.net/figtree/jakarta/
fig@fig.net

GGRS2004

07 October 2004 - 08 October 2004
Germany, Göttingen

http://www.ggrs.uni-goettingen.de
ggrs@uni-goettingen.de

12th Australasian Remote Sensing and Photogrammetry Association Conference

18 October 2004 - 22 October 2004
Australia, Fremantle

http://www.rss.dola.wa.gov.au/12arspc/
12arspc@ausconvservices.com.au
ITC attendance: Andrew K. Skidmore

5th AARSE Conference

18 October 2004 - 21 October 2004
Kenya, Nairobi

http://www.itc.nl/~aarse/aace/index.htm
ottichilo@rcmrd.org
ITC attendance: Tom Loran, Janneke Kalf (ITC booth), Wouther Siderius, Tsehaie Woldai

International Conference on Remote Sensing Archaeology

18 October 2004 - 21 October 2004
China, Beijing

http://jlrsa.irsa.ac.cn
wcl@irsa.irsa.ac.cn

UN International Workshop on the Use of Space Technology for Disaster Management

18 October 2004 - 22 October 2004
Germany, Munich

http://www.oosa.unvienna.org/SAP/stdm/
david.stevens@unvienna.org

VIII International Earth Sciences Congress 2004

18 October 2004 - 22 October 2004
Chile, Santiago

http://www.igm.cl/cct2004
cct2004@igm.cl

RADAR 2004

19 October 2004 - 21 October 2004
France, Toulouse

http://www.radar2004.org
radar2004@see.asso.fr

TOPCART 2004 (in Spanish)

19 October 2004 - 22 October 2004
Spain, Madrid

http://www.top-cart.com

Fifth International Symposium on Mining Science and Technology

20 October 2004 - 22 October 2004
China, Xuzhou

http://ismst.cumt.edu.cn/english.htm
ismst@cumt.edu.cn

Workshop on Vision Techniques Applied to the Rehabilitation of City Centres

25 October 2004 - 27 October 2004
Portugal, Lisbon

http://www.visiontec-workshop.org/
vcampos@parqueexpo.pt

UDMS 2004

27 October 2004 - 29 October 2004
Italy, Venice

http://www.udms.net
e.fendel@otb.tudelft.nl

URISA 2004

06 November 2004 - 10 November 2004
United States, Reno

http://www.urisa.org

ISWC 2004

07 November 2004 - 11 November 2004
Japan, Hiroshima

http://iswc2004.semanticweb.org

ACM GIS 2004

12 November 2004 - 13 November 2004
United States, Washington DC

http://acmgis2004.cti.gr

XI Latinamerican Remote Sensing and Spatial Information System Symposium

15 November 2004 - 19 November 2004
Chile, Santiago

http://www.cprsig.cl/