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CONFERENCE CALENDAR

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2002

number 2

introduction

When I started out as acting managing editor of *ITC News*, never did I imagine that a year or so later I would be appointed acting head of the Communication Department, the department responsible for publishing *ITC News*.

"Acting" again? ... yes ... but does this mean I'm just pretending? No, certainly not! As laid down in the Strategic Plan 2001-2004, ITC is going through a period of change. The challenging conditions ITC faces justify special attention to marketing and promotion. For instance, ITC will develop stronger relationships with its alumni, both by strengthening existing ITC alumni associations, or ITC chapters within Netherlands Alumni Organisations, and by establishing new ones. Promising steps have already been taken to update and upgrade the ITC website. And a pilot for a Virtual Alumni Community on this website is under development right now. Printing material -as you will notice if you take a good look at the lay-out of this issue of *ITC News*- will be updated according to ITC's house style. We'll keep you informed through *ITC News*.

With marketing and promotional activities high on the agenda, the Directorate is reconsidering the tasks, responsibilities and positions of the staff of the Communication Department. Until decisions are final - and that should be at end of 2003 - I will be "acting" and after that ... well, we'll see!

Janneke Kalf

Acting Managing Editor

colofon

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ITC's Education Goes Digital

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Computers have long been used in ITC's courses. They are indispensable in classes dealing with ITC's core business of GIS and remote sensing. Now, however, ITC has started to use computers and the Internet for delivering courses too - and that's something new. This new system will be used both for courses taught at ITC and for courses taught at a distance.

Individual staff members have been involved in distance education for several years now, in most cases in the (co-)production of stand-alone packages on CD-ROM. Consequently, last year ITC felt the time was ripe to run an institute-wide pilot project on distance education. This pilot proved a valuable experience for all concerned, with the result that Blackboard was selected as the most suitable digital learning environment for ITC.

Digital Learning Environment

What is a digital learning environment? The answer is an environment created by software for a module, where all information, materials (if students are to receive hard copies, these will simply be described), communication tools, etc. are available. Most digital learning environments have three functionalities:

- delivery of the module content (reading materials, assignments, tests, lecture slides)
- communication between students and teacher, and among students (e-mail, chat, discussion board, digital drop box)
- administration of the module.

Figure 1 shows the home page of an ITC module in Blackboard. On the left you can see the main navigation buttons.

Which functionalities are used, and how, will differ for courses taught at ITC and distance courses. In courses at ITC the lectures and practicals will continue to be the main part of the module. In distance courses, however, the communication functionalities will be much more important - for receiving instructions from the lecturer, for asking questions, for chatting with the lecturer and fellow par-

ticipants, for getting feedback on assignments.

Project Activities 2002-2004

The new project covers three main activities:

- The first is implementing the digital learning environment for courses taught at ITC. We are using the GFM.4 course that started in March 2002 as a pilot, and the new PM and MSc courses starting in September will be next in line. In a future issue of *ITC News* we will give an account of our first experiences.
- *ITC News* 2002-1 published an interview with Director External Affairs Sjaak Beerens on ITC's efforts to decentralise education. Many of ITC's participants who are mid-career professionals have difficulty in leaving their work and family for an extended period of time. To accommodate them, parts of ITC's courses will be taught in the region or country of the students.

Although ultimately the decentralised modules will be taught entirely by staff of the partner institutes, we do foresee a need for support from ITC in the early years. ITC staff might go to the partner institutes to teach; staff of the partner institutes might come to ITC for training before they teach the module themselves. We are developing a kind of intermediate stage in the decentralisation process: the students are taught by local teachers but support is given from a distance by ITC staff to the local teachers and/or as a teaching contribution directly to the students. Here too the use of Blackboard is indispensable. In December 2001 a pilot using this new format in Wuhan, China, proved very successful. Future issues of

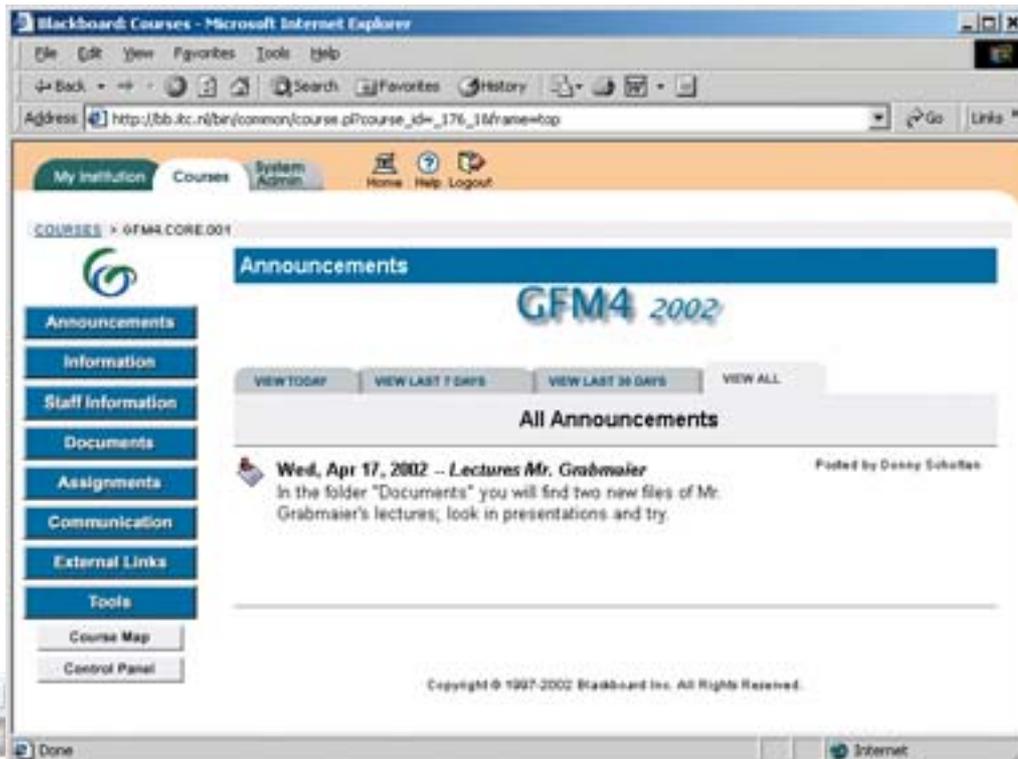


Figure 1: the home page of an ITC module in Blackboard. On the left the main navigation buttons

ITC News will keep you abreast of our experiences with this form of distant support.

- ITC is getting more and more requests from individual clients for full distance education short courses. ITC is willing to accommodate these requests, yet is hesitant. So far the experience of institutes across the world that have provided distance education to individual participants has not proved very positive. The social isolation (difficult to motivate yourself) and technical problems (no technician around to solve these problems) has led to drop-out rates of over 50%. The experiment with full distance education undertaken by ITC in 2001, although successful, still suffered from a high drop-out rate. Nevertheless, ITC will continue to de-

velop distance education short courses in order to gain more experience. During the period 2002-2003 we will be developing and offering such a course on remote sensing. Again *ITC News* will keep you posted about this module and about other distance education activities.

A small project group is responsible for coordinating and executing the project activities. There is much to do. We will share our experiences and keep you informed.

Have you had any experience of web-supported teaching or studying? Would you like to share your experiences with ITC? Would you like to share your experiences with the readers of *ITC News*? We are looking forward to your e-mails and letters.

Friendship, Sharing, and Moral and Academic Support

Report on SAB Activities 2000-2001

Ivonne Moreno Horta

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Reflecting on the SAB experiences of 2000/2001 takes me back to my first day at ITC. Welcome to the ITC "world", welcome to the Netherlands! So many friendly faces were introduced to us, the new students.

One face I remember in particular - it was Dorman's, the SAB secretary general. He talked about the Student Association Board. I paid special attention to him; somehow I felt he was "on my side" He knew what ITC was all about, and he had already had experiences that reflected not only his own perspective, but also my perspective and the perspective of almost the entire auditorium - the students' perspective.

Two weeks later I was missing all those speeches of welcome. My luggage was still travelling around Paris and, when it came to attending the official opening ceremony, I did not have the clothes I wanted. It was not until many weeks later that I heard about the SAB again, when the programme director asked the course participants to elect two class representatives, one from the PM course and one from the MSc course.

I was elected as student representative of the PM course. The election happened so fast that I didn't know what to say. Some people mentioned my name, the programme director asked me if I was willing, and the answer was "yes". At the first SAB meeting, all the student representatives began to realise that this meant something more than being the "voice" of the course participants. It required commitment and additional work in one of the board functions.

Jenny, James, Wang, Andrew, José, Charles, Julian, Isah, Leslie, Gilbert, Rheza, Fabian and myself, Ivonne, had been given the enjoyable, as well as challenging opportunity to build social spaces to increase friendship,

sharing, and moral and academic support among the students. For sure we represented the course participants, but at the same time several regions of the world. We started with a mix of enthusiasm and concern for the responsibilities to be faced, but also plenty of ideas and respect for the international environment of ITC.

Parties

Activities started with parties at the end of every module. In the former SIC room the joy and social interaction released the tension of exams and reports. Parties recharged our batteries for another three weeks of hard work. One of the best parties was the farewell party of the 1998-2000 MSc students. So many people came along that for a while they could hardly fit in the SIC room, and music from all regions of the world kept the spirit of celebration alive.



Words of welcome during the Opening of the Academic year by the SAB

Sports

In March the International Sports Day was held in Rotterdam. Andrew and many colleagues organised a sports committee that worked feverishly for about two months. In this case the non-competitors played a great supporting role. When the ITC contingent arrived at the Erasmus campus, we were an imposing presence. It took three buses to ferry the competitors and a huge crowd of some 100 student supporters. The training, the support and the early wake-up call of that morning worked like a charm - ITC, the defending champion, won the tournament for second consecutive time.



International Sportsday.

ITC won the tournament in 2001 for the second consecutive time



Excursions

Spring showed up on the calendar but the good weather remained hidden. Hard to believe, but snow was falling during the spring party. Nearly everyone exclaimed: "That's Dutch weather for you!"

Easter arrived and the SAB went to Paris. The driver, Rudy, took us around the city. One night the plan was a cruise along the Seine to enjoy the lights, but it seemed that every tourist in town had the same idea and wanted to make the same trip at the same time. With so many people around, we decided to get on the boat together, queuing like school children crossing the street.

The Keukenhof gardens provided the perfect opportunity to enjoy the famous Dutch tulips. The SAB and the SMIT (Student Association Board of the UT) jointly organised the activity. It was a blue-sky day, definitely a lovely trip, which ended up with a flower parade.

In the "catch-up" week Berlin was the destination. We took photos of the Brandenburg Gate but were a bit sceptical about the thousands of original pieces of the Berlin Wall on sale. In the summer the long hours spent on the bus to reach Vienna were really worthwhile. We enjoyed the city, and the free opera at night time - of course it was not a live one, but the big screen and the power of the performance drew us into the spirit of classical music.

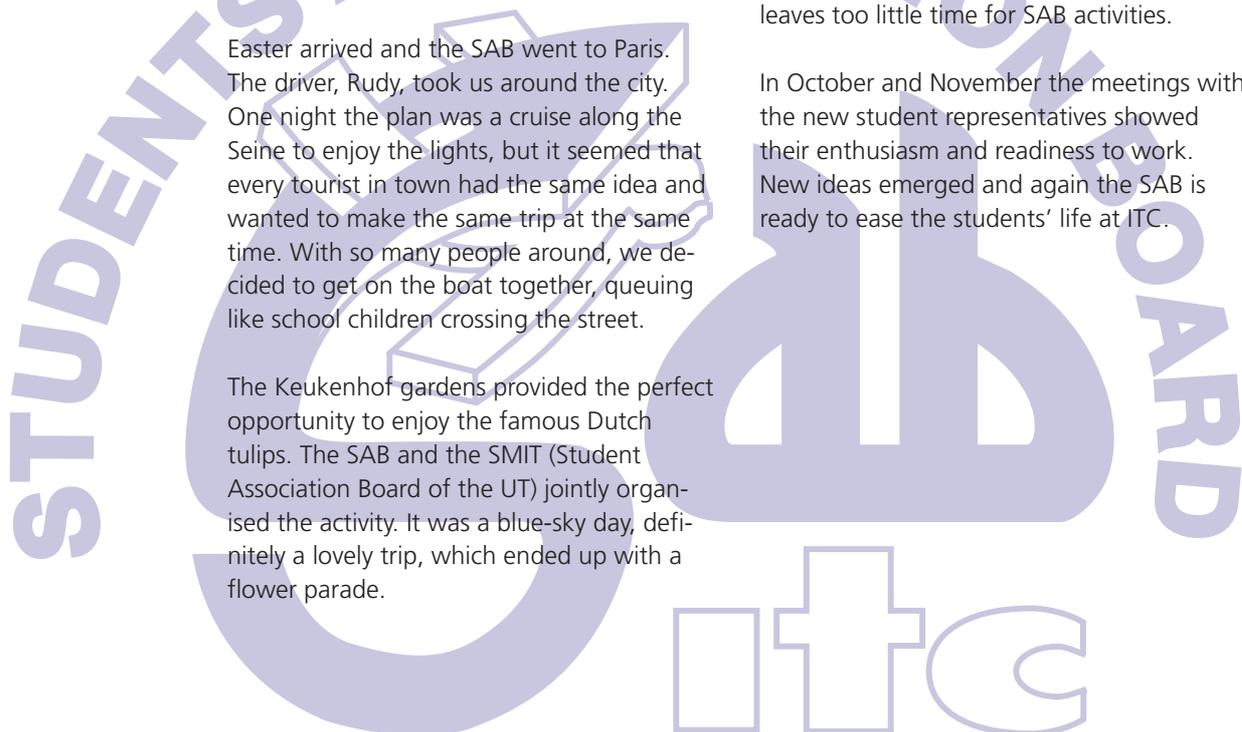
Academic Matters

The SAB played an active part in academic matters. During the board meetings the need for a commissioner to focus on comments and questions regarding academic issues became clearly apparent. Therefore the position of academic commissioner was created. With the help of this new function, the SAB put forward concerns regarding electives, IFA supervision during the summer time, and improving the evaluation of modules.

Handing Over

Suddenly it was September 2001. The activities of welcoming new students, the return from fieldwork and embarking on a thesis confirmed that our period was nearly over. After a long period of SAB activities, inside each of us was a feeling prompting us to remain as commissioners and active board members. However, the pressure of a thesis leaves too little time for SAB activities.

In October and November the meetings with the new student representatives showed their enthusiasm and readiness to work. New ideas emerged and again the SAB is ready to ease the students' life at ITC.



Dual-Purpose Visit to East Africa

Tom Loran

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Recently ITC

Rector Prof. Martien Molenaar and Director of External Affairs Sjaak Beerens visited East Africa. The purpose of the trip was two-fold: to establish contacts with educational institutes in the region, within the framework of the Institute's policy of decentralised (or better still globalised) joint education, and to participate in an ISPRS workshop.

In accordance with Memoranda of Understanding signed with Moi University (Eldoret, Kenya) and the University College of Lands (UCLAS, Dar es Salaam, Tanzania), possibilities to set up joint educational programmes will be investigated. These programmes will eventually lead to the establishment of postgraduate degree courses that will be organised and implemented under the joint responsibility of the partner institutes. Whereas the cooperation with Moi University is still in an early phase, UCLAS has long been a partner of ITC in the fields of education and research. Plans for establishing a joint educational programme in Dar es Salaam have already reached an advanced stage of development.

The ISPRS Workshop on Developments and Technology Transfer for Environmental and Resources Management was organised in Dar es Salaam from 25 to 28 March and dealt with issues of education, training and technology transfer within the framework of international cooperation. The workshop was opened by the Hon. G.A. Cheyo, Minister for Lands and Human Settlement Development, who challenged the workshop participants to come up with feasible solutions to such complexities facing developing countries as the development of human resources in the field of geospatial data and information provision.

Responding to this challenge in his keynote address, Prof. Molenaar presented ITC's view on capacity building for geo-informatics, and its application in Africa. He outlined the concept of globalisation and joint educational programmes, as described in the Institute's Strategic Plan 2001-2004 (see *ITC News* 2001-4).

In one of its recommendations the workshop emphasised the great need to establish a network of educators and trainers in the field of GIS and remote sensing. The ITC initiative is aiming at just that - by building on national and regional capacity and linking educational institutes into a solid network of GIS and remote sensing training facilities.



Ministry of Lands, Dept. of Surveying and Mapping



Signing the Memorandum of Understanding with the University College of Lands (UCLAS), Dar es Salaam, Tanzania



Signing the Memorandum of Understanding with Moi University, Eldoret, Kenya

ITC Directorate Visits West and Southern Africa

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Within the framework of assessing decentralisation possibilities, visits were made by Rector Martien Molenaar, Director of External Affairs Sjaak Beerens and Senior Project Officer Eric Holland to Nigeria, Namibia, South Africa and Mozambique during the period 8 to 24 April 2002.

As well as visiting our sister institute RECTAS (the Regional Centre for Training in Aerospace Surveys), the delegation had talks at the University of Lagos, at the Obafemi Awolowo University, Ile-Ife, with ICP/Leica (Industrial and Commercial Projects/Leica), at the ARCSSTE (African Regional Centre for Space Science and Technology Education), and at the Federal School of Surveying. While in Nigeria the opportunity was taken to pay a courtesy call on ITC Honorary Fellow Chief Coker.

An overnight flight took the party on to Namibia, where visits were made to the Polytechnic of Namibia, the Ministry of Lands Resettlement and Rehabilitation, the Royal Netherlands Embassy and the Desert Research Foundation of Namibia. At the annual graduation ceremony at the Polytechnic of Namibia, Prof. Molenaar made a keynote speech on the globalisation of education. This ceremony was attended by the President of Namibia, ministers, and polytechnic staff, students and their families, altogether some 5,000 people. A memorable evening was spent with ITC alumni who are working in Namibia.

In South Africa the delegation visited the University of Natal and Prof. Molenaar

chaired the annual steering committee meeting of the INSHURD/TELMSA Phase 2 (IT-2) project, which was hosted by the Centre for Environment and Development of the University.

In Mozambique the main aim of the visit was to sign a five-year Memorandum of Understanding with the Ministry for Coordination of Environmental Affairs (MICOA). At the same time a contract to start collaborative activities was signed. The collaboration is estimated at US \$ 3.7 million over the next five years. Representatives of the Dutch embassy were present at the signing ceremony. A visit was also made to the University Eduardo Mondlane, a partner in the collaboration with MICOA.



Meeting with RECTAS staff and PhD students (April 2002)



Rector of ITC and Deputy Minister for Coordination of Environmental Affairs (MICOA) sign five-year Memorandum of Understanding



University of Natal INSHURD/TELMSA Phase 2 Steering Committee (April 2002)



Land management graduates at the Polytechnic of Namibia (April 2002)

events

Water and Human (In)security - Building Innovative Partnerships in Water

An International Seminar for Students in the Netherlands

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To ensure national and international cooperation in water, many complex issues must be addressed in an integrated approach. Consequently there is a need for professionals who can work together in collaborative partnerships in order to identify, develop and implement equitable and sustainable solutions in water resources management.

This seminar in the Netherlands brought together 100 postgraduate students from more than 40 countries, representing a broad spectrum of fields concerned with ensuring water security and the prevention of conflicts. The seminar provided a unique setting in which the participants were able to meet their counterparts in other sectors and disciplines, and begin building the personal relationships and networks that could form the basis for effective professional partnerships in the future. Twenty-six ITC students from the different educational programmes took part in the event. The participants were encouraged to

explore the potential of state-of-the-art Internet-based tools for sharing knowledge, experiences and approaches to policy development and integrated water management, with the aim of enhancing cross-sectoral dialogue at the national or international level. In this learning process, the participants worked in teams guided by Dutch water experts, who acted as facilitators and provided support via a dedicated "collaborative platform" on the NWP website www.nwp.nl/community.

Dates and venues of the seminar were:

- Day 1: 25 January 2002, Netherlands Congress Centre, The Hague
- Interim period: 26 January to 21 March 2002, teamwork on the collaborative platform
- Day 2: 22 March 2002, The Peace Palace (seat of the International Court of Justice), The Hague.

The use of the dedicated collaborative platform, similar to the ITC's

Blackboard for Internet-based learning, sparked intensive cooperation among participants from the different institutes in the Netherlands. During Day 2, the 11 teams presented the results of their creations and projects. Prizes were awarded to three groups, known by then as the Agua Generation, Water Fuse and Salmon teams. The evaluation criteria were innovation, quality, learning and communication. The members of the winning teams - eight ITC students among them - received prizes of 600 Euros per person. During the afternoon session in the Peace Palace, the award-winning teams gave presentations in the presence of His Royal Highness, Crown Prince Willem-Alexander of the Netherlands (see photo). On behalf of the Vice-Minister of Transport, Public Works and Water Management of the Netherlands, Mrs J.M. De Vries, seminar certificates were awarded to all participants.

Follow-up

Actually the Dutch Water Partnership (NWP) and the organising committee members (IHE, ITC, ISS, WUR, Clingendael) are looking into the possibility of collating the participants' work into a larger project, to be presented at the Dutch Water Dome at the Johannesburg World Summit on Sustainable Development, which is to be held from 2 to 11 September 2002.

Ideas are also being exchanged among sponsoring and coordinating organisations and partner institutes,



Seminar presentation by ITC MSc Student, Mrs. P.M. Rupasingha from Sri Lanka



His Royal Highness, Crown Prince Willem-Alexander of the Netherlands talking international water management issues with organizing Committee members at the Peace Palace, The Hague

with a view to organising this event on a regular (for example) two-yearly basis. As such, the investment of the students in water partnership building across the world could form an integral part of their course curriculum in the faculties of the international education Institutes in the Netherlands (IHE, ITC, ISS) and collaborating universities.



His Royal Highness, Crown Prince Willem-Alexander of the Netherlands with one of the prize winning teams

Sponsored by:

Partners for Water, Ministry of Transport, Public Works and Water Management

Coordinated by:

Dutch Water Partnership (NWP)

Partner institutes:

- International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE), Delft
- International Institute for Geo-Information Sciences and Earth Observation (ITC), Enschede
- Institute for Social Studies (ISS), The Hague
- Wageningen University and Research Centre (WUR), Wageningen
- Institute Clingendael, The Hague

Collaborating universities:

Erasmus University, Rotterdam
Free University, Amsterdam
Delft University of Technology

6th GISDECO Conference Examines Links between GIS and Governance

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From 15 to 18 May ITC hosted the 6th GISDECO conference, on the theme "Governance and the Use of GIS in Developing Countries".

A hundred and twenty-five participants from more than 30 countries came to ITC to discuss how Geographic Information Technology (GIT) can, or should contribute towards improving governance in developing countries, with such questions as: How do public, private and civil society stakeholders address governance through using GIS? How in turn does GIT explicitly or implicitly affect governance systems and structures in urban and rural areas?

The practice of what is "good governance" depends upon the historical, cultural and political circumstances of particular societies. The scope of governance is not just the efficiency of government service delivery, but is typically defined through constructs of accountability, legitimacy, respect for basic rights, competence (efficiency and effectiveness) and equity. Spatial information is relevant in these five dimensions, and the development and use of GIT can be expected to impact on governance relationships. Concomitantly, the potential of GIT/GIS for improving the

quantity and quality of spatial information and enhancing analytical capabilities can alter power relationships in governance.



Members of the International and Local Organising Committees

After the formal opening by Sjaak Beerens on behalf of the rector of ITC, Dr Pieter van Teeffelen said a few words of welcome on behalf of the GISDECO International Committee. Then in his opening address Dr Bamidele Olowu of Nigeria and ISS challenged the participants to consider what governance means and doesn't mean in developing countries, and how spatial data might contribute. Two other keynote addresses were given during the seminar, the first by Prof. Carole Rakodi (Birmingham) on urban governance and GIS, and the second by Dr Suan Pheng Kam (IRRI) on GIS in rural governance for sustainable development. These set the scene for more than 40 other contributions.

Papers and posters introduced practical applications of GIS in the public, private and civil society sectors, and included such topics as:

- GIS and social responsibility in urban planning
- informal settlements
- urban agriculture
- community-based natural resource management
- community infrastructure management and service delivery
- training in GIS & governance
- capacity building in government agencies and in the private sector, linking governance issues with participatory GIS and with technical GIT.

The seminar finished with a panel discussion relating to the main theme of spatial information and GIS for better governance.

A new idea was a short "break-out" session for participants to discuss a variety of special issues, including "good practice" ideas for local governance, eliciting indigenous knowledge for local GIS, and guidance for successful publishing. There was also the opportunity for six companies and institutions to exhibit their GIS hardware, programmes and/or applications.



Conference Delegates during Civic Reception at the Enschede Town Hall. (L-R) Dr. Ahris Yaakup, Susilawati Sulaiman, Prof. Charles Choguill, Dr. Marisa Choguill

Three parallel workshops were provided to about 50 participants on the first day: a debate on the primary theme of the seminar, "Local Governance and GIS" (P. van Teeffelen and E. de Man); "Participatory Geo-information Acquisition & Analysis in Collaborative Space", including mobile GIS (M. McCall and R. Gonzalez); and "GIS for Governance - Effective Use of Data from Multiple Sources" organised by ESRI and L. Montoya.

The event was well supported by a number of commercial and government sponsors, including ARCADIS, ESRI, DIME, Kadaster Nederland, PCI and SIA, as well as ITC itself. Especially appreciated was the support from the city of Enschede, which presented their e-governance initiatives, hosted a reception in City Hall and led an excursion to the redevelopment site of the fireworks disaster of 2000.



Ravi Gupta M. Tech. (Centre for Spatial Database Management and Solutions) from India during his presentation "Can Elephants Dance?"

At the end of this fruitful seminar, the International Committee invited ITC to host the GISDECO secretariat - to follow the first 10 years of successful management by the University of Utrecht in the person of Pieter van Teeffelen. Within ITC, responsibility will lie with the new Department of Urban & Regional Planning and Geo-Information Management, with Richard Sliuzas being the coordinator.

For now, GISDECO remains an informal network and platform of experts, planners and project managers engaged in GIS applications in developing countries. The network provides an open forum among researchers and practitioners, geared towards progress in problem solving in applying GIS technology in development processes. Such applications involve the participation of different actors in the acquisition and use of geo-information. GISDECO seeks both to pro-



Final Panel Discussion with Richard Sliuzas MSc, Prof. Carole Rakodi, and Dr. Suan Pheng Kam



Professor Ian Masser Chairing the final Panel Discussion



Lively debate during the panel discussion (Rene Senapo, Cebu, The Philippines)

edge and practical experience is seminars and workshops, though some new initiatives are being considered. Many ITC alumni are already involved in these practices and are well aware of the need to develop improved systems of governance. GISDECO invites ITC alumni and other interested people to visit the GISDECO website to learn more about and participate in the network.

More information on GISDECO can be obtained via e-mail: GISDECO@itc.nl and very soon a web page will be opened at the ITC site www.itc.nl.

mote technology transfer for managing GIS, and to apply geo-information towards goals of sustainable equitable development - while safe-

guarding the biophysical environment - in the context of good governance principles. The major forum for the exchange of knowl-

Holland Education Fairs in Vietnam

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"Success breeds success" ... or does it? Once in a while these old sayings should be put to the test. So hard on the heels of the successful Holland Education Fair in Vietnam last year, Nuffic and EVD have organised two fairs in Vietnam this year, both in cooperation with the Vietnamese Ministry of Education and Training.

The first was held on 11 and 12 May in Hanoi, and the second on 15 and 16 May in Ho Chi Minh City. What's more, NUFFIC is still actively promoting the idea of opening an education support office in Vietnam.

Together with FION and KIT, ITC manned booths at both fairs, which attracted a good number of people. Most of the visitors knew only too well what they wanted to study and bombarded the representatives with pointed questions. It goes without saying that these representatives coped admirably under fire and lived to tell the tale.



At the reception hosted by the Dutch embassy Paul Schoonackers and Lyande Eelderink had a most enjoyable dinner in the company of alumni



The ITC booth in Hanoi

staff news

A one-day workshop under the theme "Deposits and Geo-Environmental Models for Resources Exploitation and Environmental Security" was held on 5 April 2002 to mark the retirement of **Prof. Dr Andrea G. Fabbri**, professor of geology.

Prof. Fabbri had been with ITC for over 12 years and during that time he was instrumental in developing various geo-environmental models that have since become part and parcel of the Institute's training packages. Among the many models he developed, special emphasis should be given to the themes of predictive mineral potential mapping, weight of evidence modelling, the theory of fuzzy sets, logistic regression, predictive spatial data analysis in the geosciences, and environmental impact assessment for earth scientists. Over the last few years, many PhD and MSc researchers at ITC and elsewhere have benefited from using his techniques as part of their research.

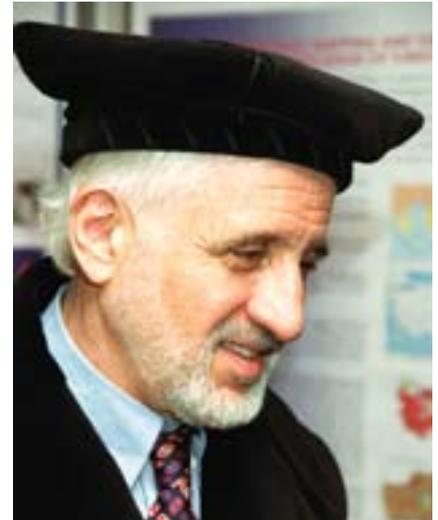
By instigating and encouraging activities directed towards the geo-environmental modelling of processes, he also played a major role in shaping and steering the activities of the former Geological Survey Division in the direction of environmental geology.

On 21 May 2002 **Prof. Dr Wolfgang Kainz**, professor of spatial information theory and applied computer science, gave his valedictory address, entitled *Mass Information: Information for the Masses*. In his address he said that we lived in an information society, with the amount of information offered by the media and other sources growing exponentially. He pointed out that, although in the developed world an increasing number of households owned at least one computer linked to the Internet, the question of whether we really made efficient and effective use of all this information still remained.

The presentation addressed the issues of technology and societal impact in an information society. Emphasis was placed particularly on geo-information and the problems that arise in a heterogeneous world between those who have the means to access information and those who do not. Starting from a general perspective, Prof. Kainz went on to focus on the developments that had taken place in the world during his time at ITC and what – from his perspective – ITC was able to contribute and might be able to contribute in the future.

After 10 years with ITC, Prof. Kainz has now accepted a new position at the Department of Geography and Regional Science at the University of Vienna.

On 22 April 2002 **Prof. Dr J. Alfred Zinck**, professor of soil survey, was awarded the title of Honorary Professor of the Universidad de Nacional de Tucumán (Argentina).



Prof. Dr Andrea G. Fabbri



Prof. Dr Wolfgang Kainz

Welcome to ITC

Dr Jacek Gurwin

Post-doctoral Fellow, Department of Water Resources and Environmental Studies (per 6 March 2002), e-mail: gurwin@itc.nl

Staff leaving

Dr Susanne Groten

Assistant Professor, Department of Agriculture, Conservation and Environment (per 1 July 2002)

Prof. Dr Ian Masser

Professor of Urban Planning and Management, Head of the Department of Urban, Planning and Management (per 1 October 2002)

Prof. Karl Harmsen Appointed Director CSSTEAP

Sjaak Beerens

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On 23 April 2002 former rector Prof. Dr. Ir. Karl Harmsen (1997-2000) was appointed director of the Centre of Space Science Technology Education for Asia and the Pacific (CSSTEAP), which is located in Dehra Dun, India, on the campus of ITC's sister institute, the Indian Institute of Remote Sensing.

The CSSTEAP operates under the aegis of the United Nations Office for Outer Space Affairs, based in Vienna, Austria.

Prof. Harmsen is on secondment from ITC at the explicit request of the Governing Council of CSSTEAP, chaired by Dr K. Kasturirangan, the chairman of the Indian Space Research Organisation (ISRO). An

agreement to this effect was signed between the CSSTEAP Governing Council and ITC in March this year. Prof. Harmsen remains a staff member of ITC and as such will act as liaison between CSSTEAP and ITC, who have agreed to pursue collaboration in the field of joint education and research programmes.

CSSTEAP was established in 1995 in response to the UN General Assembly resolution (45/72 of 11 December 1990) endorsing the recommendations of UNISPACE-82. The objective of CSSTEAP is to enhance the capabilities of the member states in different areas of space science and technology that can advance their social and economic development. CSSTEAP has a regional function, at-



Prof. Dr Ir Karl Harmsen

tracting staff from professional organisations in the various member states (India, DPR Korea, Indonesia, Kazakhstan, Kyrgyzstan, Malaysia, Mongolia, Myanmar, Nauru, Nepal, Philippines, Republic of Korea, Sri Lanka and Uzbekistan).

NEW ITC PUBLICATION

**Landscape Ecology Applied In Land Evaluation, Development And Conservation
Some Worldwide Selected Examples**

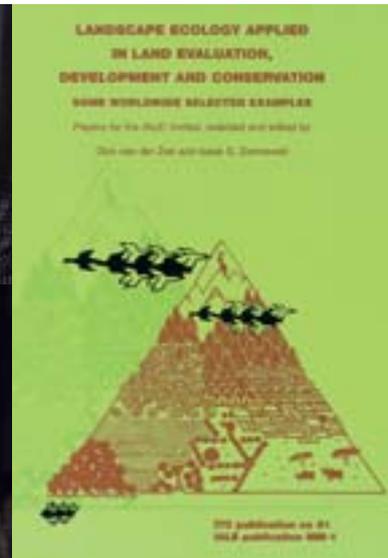
Editors
D. van der Zee and I.S. Zonneveld

The IALE book MM-1, *Landscape Ecology Applied In Land Evaluation, Development And Conservation: Some Worldwide Selected Examples*, containing papers invited, selected and edited for the IALE by D. van der Zee and I.S. Zonneveld, appeared at the end of 2001. It comprises 22 papers by 33 authors from Asia, Africa, Latin America and Europe, 17 of which are ITC alumni. This overview of the practice of landscape ecology in various countries, mainly outside Europe and North America, is of course far from exhaustive. Of the papers 11 concern case studies in Asia, five in Africa and four in Latin America.

Common to all papers is the description of environmental problems related to change, degradation and the development of certain types of land(scape) use. Moreover, in all papers the land is approached as a system, a correlative complex of factors that cannot be studied in isolation. This justifies incorporation in this book. While the main aim in some papers may be to describe and draw attention to a specific type of land use, other papers may focus on a certain methodology (e.g. in respect to inventory or land evaluation, scenario use in planning and management). Some papers incorporate more than one of these aspects of land ecological application.

The contents of the book have been grouped into three parts:

- I: Various land uses, change and sustainability
- II: Evaluation, planning, policy
- III: Methodology, management.



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For information on ordering, please contact
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announcements

Introducing ILWIS 3.1 Academic!

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After a year's hard work ILWIS 3.1 Academic has been released ... in May 2002 to be precise.

Besides several improvements in the software and on-line help, ILWIS 3.1 contains important new functionalities, for example:

- Creating stereo pairs from two aerial photographs.
Viewing the stereo pair with a stereoscope mounted onto the monitor.
When using black-and-white photographs, the stereo pair can be viewed as an anaglyph.

- Pyramid layers for raster maps in order to increase display speed.
- The Classify operation has been extended with a prior probability option.
- When writing applications on top of ILWIS, all expressions available on the ILWIS command line of the Main Window are now also available for using ILWIS as a COM server.
- Access to external databases through OLE DB.
- In a Map Window, multiple raster and polygon maps can now be dis-

played on top of each other, using transparency.

- Graphs have become separate objects. A Graph Object can be shown in a Graph Window, and can be stored on disk.

For more detailed information on the new functionalities, please visit the ILWIS website at:

<http://www.itc.nl/ilwis>.

We would also like to draw your attention to the ILWIS mailing list. This is meant to serve as an informal user-to-user discussion forum, and offers you support from fellow ILWIS users.

The list is archived and subscription requests may be sent to listserver@itc.nl.

The body of the subscription message should be: `subscribe ILWIS-list`.

Messages for the list (which is then sent to all members) should be sent to ILWIS-list@itc.nl



Transfer of the Journal to Elsevier Science - Part 2

Alfred Stein

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In the 2001-4 issue of *ITC News* we read that the *International Journal of Applied Earth Observation and Geoinformation*, the former ITC Journal, had been transferred to Elsevier Science.

That story has now acquired an interesting follow-up. Elsevier Science has asked me to become editor-in-chief for the coming years. After some deliberation I have agreed to this proposal and am most happy to take up where Prof. Martin Hale left off. Although it will be difficult if well-nigh impossible to match him - let alone to surpass him - in his dedication to the journal, I have decided to take up the gauntlet. The journal is to remain embedded within the ITC community!

The journal will continue to be a scientific publication. It is also to remain a means of scientific communication between ITC, its alumni and international institutes. As you will see below, papers from developing countries are most welcome. An essential step will be a change in the editorial structure. A small group of very active scientists have been appointed as associate editors. This group is being asked to ensure a constant stream of high-quality manuscripts. In this way we hope to increase the scientific level of the journal yet further. But there is more. The move to Elsevier also ensures that the journal will be available on line via *Science Direct*, thus guaranteeing a wider spread and better accessibility. Finally, the journal will receive an *impact factor*. This makes it easier to see whether the journal and individual papers are enjoying any spin-off, and should also reveal how well individual papers are received and to what extent they reach the public.

Of course everything has its price. One drawback that we have to face and to deal with is that the journal will no longer be free - not even to our alumni. Still, the price has been kept to a very reasonable level. It is now my pleasure to invite you all to submit original high-quality scientific manuscripts to the new journal. The new address is: Elsevier Science, Mr. Friso Veenstra, P.O. Box 1930, 1000 BX Amsterdam.

All in all, I am convinced that this is a prudent step into the new future - an essential step and a wise one. Without doubt, Martin Hale and his team have managed to do a great job publishing the Journal and I sincerely hope that I can continue this. Publishing, printing and distribution are specialised tasks and Elsevier has a extremely good reputation in this field. Similarly good science is, and will continue to be the province of all scientists who actively participate in the field of earth observation and geo-information. Clearly the community of present and former ITC scientists belongs to this group. As can be seen from the section below, there is plenty of opportunity for the journal to serve as an outlet for ITC's scientific activities.

Aims and Scope of the Journal

The journal publishes original papers that apply earth observation data to the inventory and management of natural resources and the environment. In this context earth observation data are normally those acquired from remote sensing platforms such as satellites and aircraft, complemented and supplemented by surface and subsurface measurements and mapping. Natural resources include forests, agricultural land, soils, water resources, mineral deposits, and land

itself as a foundation for infrastructure and housing. Environmental issues include biodiversity, land degradation, industrial pollution and natural hazards such as earthquakes, floods and landslides. The focus, which can be either conceptual or data-driven, includes all major themes in geo-information, for example capturing, databasing, visualising and interpreting data, as well as issues of data quality and spatial uncertainty.

Since the scope is broad, contributions should be of the highest quality. Some will convey important recommendations for environmental management and policy, but we also wish to encourage articles that stimulate statistically sound dialogue between managers and earth observation scientists.

Papers addressing such topics within the context of the social fabric and economic constraints of developing countries are particularly welcome.



Alfred Stein, editor-in-chief of the *International Journal of Applied Earth Observation and Geoinformation*

project news

ITC to Support Environmental Affairs in Mozambique

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On 22 April 2002 the Hon. Francisco T.C. Mabaia, Deputy Minister for Coordination of Environmental Affairs (MICOA), Mozambique, and Prof. Martien Molenaar, rector of ITC signed a five-year Memorandum of Understanding and a one-year contract to formally start cooperation between MICOA and ITC.

The agreements concern institutional support and human resource development in the area of environmental affairs in Mozambique (SEAM). While US\$ 100,000 has been agreed for the start-up activities in 2002, the total value of the agreements is estimated at US\$ 3.65 million. This is the first project that we have been awarded under the new so-called *Herfkens* model for Dutch bilateral assistance. Our client is MICOA, not the Dutch embassy. SEAM is considered a programme with long-term perspectives, not a five-year project with limited objectives. The beneficiaries of the institutional support and human resource development come from all line ministries involved in the environmental sector in Mozambique and, of course, from MICOA itself.

ITC's Department of Agriculture, Conservation and Environment (ACE) will lead the SEAM MICOA programme, which has a number of interesting aspects. Three training and education programmes will be developed: one at polytechnic level, one at master's level and an in-service on-the-job component. A formal training needs analysis will be undertaken for each of these programmes and the developed methodology will be interesting for our decentralisation activities in other areas.

The polytechnic-level programme involves upgrading MICOA's existing terrestrial planning (town and country planning) course and establishing a new environmental planning course. Material from the Polytechnic of Namibia land management courses will be used in the upgrading process and in the design of the new environmental course. Both courses will be translated and taught in Portuguese. The English language curricula of the environmental planning course will be made available to the Polytechnic of Namibia for use in Windhoek.

The master's-level programme in environmental affairs will be hosted by, and developed with the assistance of the University Eduardo Mondlane (UEM). Cooperation with the Centre for Environment and Development (CEAD) of the University of Natal is planned, and it is anticipated that material developed under the TELMSA/IT-2 projects and under other CEAD programmes will be made available to UEM.



MICOA classroom facilities



MICOA Director of Territorial Planning Arlindo Dgedge with his students

On-the-job training will be provided to MICOA staff and to staff from line ministries by developing two case studies, which will also be useful in the education programme. MER, the Dutch EIA agency, will participate in the case studies. Advice will be provided to establish GIS labs and a documentation and information centre. Key staff from across the environmental sector in Mozambique will be exposed to awareness training illustrating best practice in the southern African region and in the Netherlands. Training the trainers is a key activity for both polytechnic- and master's-level courses, with fellowships provided for study at ITC, CEAD/UoN and PoN.

The SEAM programme will benefit considerably from ITC's established network in southern Africa.

The team leader of the SEAM programme is Dr Bert Toxopeus, and Eric Holland, as project supervisor, provides financial and administrative

back-stopping. Joost Teuben will lead the training needs analysis component, and the Mozambique experience and language skills of Liza Groenendijk (eight years at UEM) and Kees Bronsveld (six years at INIA/FAO) will be invaluable.

Special Programme on Mapping and Property Valuation for the Department of Lands and Surveys of Cyprus

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The Government of Cyprus and the Department of Lands and Surveys (DLS), the official national agency for all surveying and mapping operations, have embarked on a programme to improve the efficiency and effectiveness of departmental activities, taking advantage of available information technology and modern cost-effective survey instrumentation and techniques.

The general strategic objectives are to:

- establish, after a systematic resurvey, a fixed-boundary coordinated cadastre system
- computerise the land records and cadastral plans
- develop a number of computerised systems to support the survey, registration, valuation and land management functions of the department
- develop and implement in stages a national land information system where all agencies with land-related activities can share available data for the benefit of the country's economy.

ITC prepared a compact and comprehensive tailor-made programme to meet the training needs of the DLS.

This programme, funded by the EU and supervised by ITC's Barend Köbben, ran from 8 April to 8 May 2002. Twelve employees from different branches of the DLS came to Enschede and followed intensive training courses in photogrammetry, remote sensing, digital cartography and computer-assisted valuation.

During the programme, participants visited such companies as OrtaX, Waarderingskamer, HansaLuftbild and PlantijnCasparie in order to gain an impression of how certain European

organisations are dealing with valuation models, cartography and state-of-the-art aerial surveying and mapping. Guest speakers from ARCADIS and the Netherlands Cadastre also made a valuable contribution to the programme.

The three-day seminar bringing the programme to a close provided the opportunity to present acquired knowledge and skills to senior management of the various DLS sections.

Participants after their graduation, with senior DLS staff and ITC's Barend Köbben



ITC Activities in Croatia

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ITC has traditionally focused on transferring knowledge to the developing countries of Asia, Africa and South America. Under the new Strategic Plan 2001-2004, the list of partner countries will be extended to include all that are "economically and technologically less developed".

In that sense, the so-called transitional European countries (mainly from Eastern Europe) are also interesting clients. This is a brief overview of recent ITC activities and further possibilities for cooperation in Croatia.

Croatia is a young and relatively small (4.5 million inhabitants) country, which is moving from a government-run to a free-market economy. A characteristic of former socialist countries is that they generally invested heavily in collecting and organising geo-information. In fact, any government agencies involved in the production of geo-information use up-to-date technologies and methods. But the state sector is being both decentralised and restricted in accordance with current thinking on the role of government. This has signifi-

cant implications for geo-information providers and users. For example, the government agencies in Croatia will soon be privatised, but the privatisation model and future data ownerships are still unclear. Second, there are many geodata in analogue format that are of high quality and require integration. However, it is not clear who is to achieve this and how, or how these data will be applied in management and decision making. Moreover, communication among the different institutions involved in geo-information production is limited and often based on competition. Multidisciplinary teams or institutes that would strengthen cooperation are lacking. ITC has experience of all these issues and could play an important role.

The list of ITC alumni and joint projects in Croatia is comparatively short. There is considerable interest in setting up more projects, particularly because ITC enjoys a good educational reputation in Croatia. But there are problems. Although there are sufficient funds in the public sector to send people to ITC as own-accounters, bureaucratic procedures are a

limiting factor. On the other hand, private companies involved in geo-information production lack the funds to send their employees to Enschede. In recent years, however, collaboration has been increasing, and here is a summary of the main points:

- Since independence in 1992 three Croatian students have gained MSc degrees at ITC, and currently one PhD student is studying at the Institute. In total, there are around 10 alumni in Croatia.
- ITC is collaborating with the Croatian Mine Action Centre on a project to develop a methodology (based on remote sensing) for detecting mines.
- In the last three years Dr Rossiter of the Soil Science Division has visited Croatia twice to supervise field-work. During these visits he visited numerous land use planning agencies and university departments. Last year he held seminars in Split (entitled "Geo-information and Modern Land Use Planning") and in Osijek (entitled "Status and Prospects for the Use of Geo-information for Land Use Planning in Croatia").
- In February this year Mr S. Husnjak, assistant professor from the University of Zagreb, visited ITC in the capacity of visiting scientist. He worked on quantifying and evaluating the adequacy of the soil data coming from the Croatian National Soil Survey (see seminar abstract at <http://intranet.itc.nl/research/seminars/0016.asp>).

Two of the main initiators interested in more concrete cooperation are Geodata, a private company from Split, and the AGIS Centre, the newly-established GIS division at the University of Osijek. The primary concern of these and similar organisa-



Tomislav Hengl with Mr and Ms Baučić from Geodata during the graduation ceremony in March this year

Special Course "Urban Environmental Mapping, Trujillo, Peru"

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tions is to cooperate with ITC in competing for numerous projects, especially those funded by the EU. Secondly, all Croatian ITC alumni would support the initiation of short or permanent courses organised by ITC in Croatia. Moreover, Geodata have come up with an interesting suggestion: establishing an educational GIS centre in Split, which would focus on applications in the Mediterranean. To give proof of its intentions, Geodata hosted an ITC MSc student, Ms Yongjun Zhao from China. Ms Zhao worked with Geodata on a noise management system for Split airport. The result has proved remarkable and ITC recently selected Ms Zhao for an ESRI internship (see *ITC News* 2002-1, page 13).

All in all, there is room for improvement in the area of cooperation. Many of our colleges in Croatia have asked for a tutorial course on ILWIS. Although the number of copies sold in Croatia is only small, there is considerable interest. The new version of ILWIS has high potential in Croatia, especially in small government agencies, extension services and universities, and could be easily adopted through cooperation and better promotion.

From 18 March to 17 May 2002 a special course on urban environmental mapping was conducted at ITC for 15 people from different institutions and several universities, all working in Trujillo, the third largest municipality of Peru. The course was made possible through NUFFIC's special fellowship programme.

Ing. José Murgía Zannier, mayor of Trujillo, and Arq. Nelly Amemiya Hoshi, head of the Urban Planning Bureau, were invited by ITC to participate in the presentation of the course results and also to attend the GIS-DECO (GIS in Developing Countries) conference.

ITC Activities in Peru

As reported in an earlier issue of *ITC News*, since 1998 ITC, together with the Institute for Housing and Urban Development Studies (IHS) of Rotterdam, has been involved in the PEGUP project (Programa de Educación en Gestión Urbana para el Perú; Peru Urban Management Education Programme).

In Trujillo ITC is assisting the municipality to develop a municipal information system (currently better known as a local spatial data infrastructure). The development and above all the implementation and measurable benefits of such systems are considered complex due to the required inter-institutional relationships. ICT and GISs have been introduced in many developing countries but the benefits have only been modest. This is because no changes have taken place in the technical or organisational structure of the organisations, and digital databases and particularly CAD maps have been allowed to mushroom in a great variety of formats within different private and public institutions, municipal organisations and even within individual departments.

SIMTRU (Sistema de Información Municipal de Trujillo), which takes a long-term perspective, has been converted into a conceptual model, and a pragmatic step-by-step approach used. The first project was improving the property tax systems, the second



Course Director, Dr Jan Turkstra presenting course certificate to former ITC student Pablo Manuel Arteaga Zavaleta MSc of the Universidad Privada Antenor Orrego who was a key contributor to the realisation of the Atlas

project an environmental atlas of the city. Both activities can be seen as attractive products of a process to develop and strengthen relationships between producers and consumers of environmental data sets and geographical data sets such as census and cadastre data sets. This requires not only the political will but also an institutional willingness to cooperate and exchange information - commitments that exist in Trujillo.

Urban Environmental Atlas

Within the local administration, and also among society at large, there is an increasing awareness that environmental management is urgently required (Agenda 21). It is within this context that the city of Trujillo requested ITC, during a visit of ITC Director of External Affairs Sjaak Beerens, to assist with the development of an urban environmental atlas.

The purpose of the atlas is not only to provide environmental information but also to strengthen the SIMTRU process. Compared with the cadastre project, more institutions have become involved. The Water Irrigation Board, the Water and Sewerage Company, the Public Register, other municipal departments, four universities (for specific environmental data) and the private sector via the Chamber of Commerce are all participating in the development of the atlas.

Preparations to develop the data on the basis of SIMTRU were carried out in Trujillo over the period of one year. Most data were in digital (AutoCad, ArcView, ILWIS) format at the beginning of the course. At ITC a learning-by-doing approach was used. In the first two weeks lectures were given on GIS, cartography and environmental modelling, but most time was reserved for developing the atlas. This atlas consists of some 40 maps (scales 1:50,000, 1:100,000 and 1:200,000) and a further 80 pages of illustrations, graphs, text and statistics (all pages in A3 format).

At ITC on 15 May, Ing. José Murgía Zannier presented the draft version of the atlas in the presence of Consul General of Peru Señor Carlos Ernesto Retes Rivero, a representative of NUFFIC, and ITC staff. ITC's Dr Koert Sijmons and Ruben Vargas Franco have been intensively involved and the Institute will also support the final editing and printing of the atlas in Peru.

Moreover, in September-October 2002 ITC will assist with the presentation of the atlas, with educational awareness programmes for secondary schools and universities, and with technical workshops for the further development of SIMTRU.

The intention is to develop a CD-ROM and a web-based version of the atlas in order to facilitate wider distribution of the environmental information.

Members of the course, ITC Staff, Mayor of Trujillo, Representative of NUFFIC, Consul of Perú following the official presentation of the Atlas



research news

PhD Graduation: Yaolin Liu

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Liu Yaolin was born in 1960 in the city of Huanggang, Hubei Province, China. He received his BSc in geo-mechanics from the China University of Geo-science in 1982. From 1982 until now, he has been working in the Department of Cartography of the former Wuhan Technical University of Surveying and Mapping (merged into Wuhan University in August 2000). In the meantime, he received an MSc in remote sensing application in automated classification methods from the China University of Geo-science in 1988 and a Postgraduate Diploma in soil surveying, with a specialisation in remote sensing, from ITC in 1989.

He became vice-dean of the School of Cartography and Land Information at the former Wuhan Technical University of Surveying and Mapping in 1994 and dean in 1997. Since 2000, he has been dean of the School of Resource and Environment at Wuhan University.

In the course of his research he published many scientific papers and completed a PhD thesis entitled *Categorical Database Generalization in GIS*, which he defended successfully at ITC on 8 May 2002.

Categorical Database Generalisation in GIS
Categorical databases are widely used in GIS for different kinds of application, analysis, planning, evaluation and management. Database generalisation, which derives different resolution databases from a single, more detailed database, is one of the key research problems and a hot research topic in the field of GIS and cartography. This dissertation presents a framework for categorical database generalisation in GIS. Among other things, it defines the conceptual aspects of current categorical database generalisation transformation and the constraints for generalisation transformation; elaborates on supporting data structure and transformation units; develops auxiliary analysis methods; and demonstrates some application examples.

Database generalisation is considered a transformation process. Three kinds of transformation are defined, based on the characteristics of a categorical database and categorical database generalisation. They

are geospatial model transformation, object transformation and relation transformation. Each transformation has a certain function and deals with some aspects of the database.

Database generalisation (transformation) requires a data structure that strongly supports data organisation, spatial analysis and decision making in a database. The design of a data structure should take two functions into account. The first provides the basis for describing and organising spatial objects and the relationships between them, the second is for analysing and supporting operations on spatial objects.

In a categorical database, similarity between object types can be described by a similarity measure. The similarity is application-dependent. In a sense, the similarity will control and guide database transformation operations. A similarity evaluation model and similarity matrix are proposed for analysing and representing similarity be-

tween objects and object types in this study, based on set theory and classification and aggregation hierarchies.

Constraints such as transformation conditions play a key role in the process of database generalisation. Constraints can be used to identify conflicting areas, guide choices of operations and trigger operations, as well as govern the database generalisation. The processes of generalisation should be performed by a series of operations under the control of constraints. Three types of constraints, data model, object and relationships based on an object-oriented database, are proposed in land use database generalisation. These constraints can be specified interactively by users and varied to reflect different objectives or purposes. These types of constraints are application-dependent. This will make the database generalisation process very flexible/adaptive, and decision making can be based on geographical meaning, not simply on the geometry of an object.

An important element proposed in this study is the transformation unit. It is an important process unit because many generalisation problems

need to be solved by considering a subset of related objects as a whole, rather than treating them individually. In a sense, the transformation unit is a basic analysis processing decision-making unit that triggers aggregation operation processes, and it plays an important role in database transformation. The conflicted objects and related objects are organised into a transformation unit. A transformation unit that "brings together" a subset of objects can be created by conflicts in the thematic and/or geometric aspects of objects, by spatial relations among objects, or by integrating them. The main purpose of creating a

transformation unit is to prepare for an aggregation operation. It limits the area and number of a set of related objects in an aggregation operation. The different conflict types will create different types of transformation units. In this study, four types of transformation unit are considered, based on the constraints discussed, each of which has a corresponding aggregation operation.



Copies of *Categorical Database Generalization GIS* by Dr Liu Yaolin are available from the ITC Bookshop.

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Price: Euro 13,61 (excluding mailing costs), Publication number: DIS088

Obituary

Prof. Dr Ferdinand Jan Ormeling (1912-2002)

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On 1 May 2002 ITC lost one of its fellows. After a severe illness that lasted a couple of months, Prof. Ormeling died in his home in Lonneker at the good old age of 90. For more than 70 years of his life he was engaged in geography and cartography, and he undoubtedly made great contributions to the further international development of both disciplines.

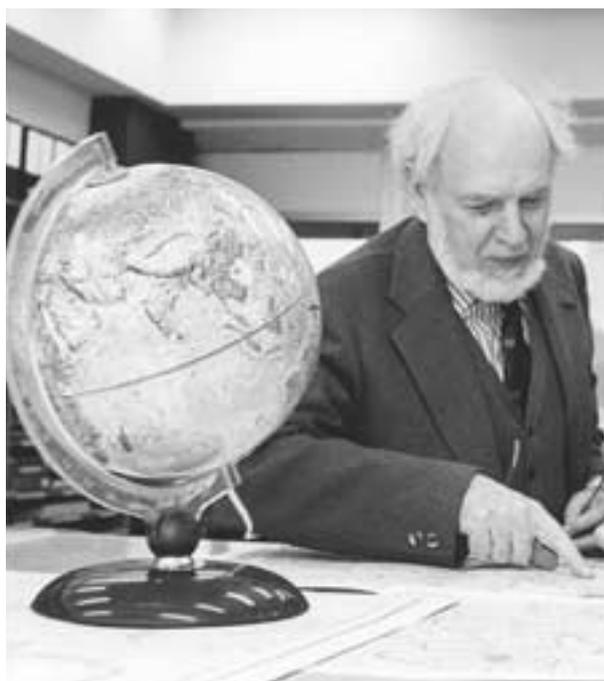
He started his career as a geography teacher but then went to Indonesia, where he became the co-founder and first director of the Geographical Institute of the Topographical Service (1948-1955). In 1955 he obtained his PhD at the University of Indonesia in Jakarta with the topic *The Timor Problem: A Study of an Underdeveloped Island*. After his return to the Netherlands he became responsible for editing all atlases, wall maps, textbook maps, etc. published by the company J.B. Wolters in Groningen. He was the founder of the Geo-cartographical Institute J.B. Wolters and, for a period of 22 years, he was the editor-in-chief of nine editions of the most widely used Dutch school atlas, the *Bosatlas*. Through these successive editions he gradually introduced thematic cartography into Dutch geography classes. In the period from 1964 to 1970 he was professor of economic geography at the University of Amsterdam. And he became the founder and first director of the Economic Geographical Institute at the same university.

With all this experience in founding geographical and cartographic institutes, there could be no better scientific cartographer to establish a new Cartography Department at ITC. In 1971 he became the first ITC profes-

sor of cartography. With his professional knowledge, his infectious enthusiasm and his gift to inspire, in no time at all he had created an extremely productive team of highly motivated cartographic experts from different backgrounds and from all fields of cartography - the department was blossoming. He performed so well in his function as head of department that it took quite a number of years before a suitable replacement could be found after his retirement from ITC in 1982. Not only did he inspire his staff, he also won his students (registered for the various cartography programmes that had been established) over to the cartographic discipline. And in so doing, he helped to alleviate the world's backlog in mapping, thus contributing to the mission of ITC. The success of Prof. Ormeling and his team was reflected in the ever-increasing number of applicants for the ITC cartogra-

phy courses - a number that rapidly became three to four times higher than the number of places available.

At the same time, Prof. Ormeling promoted cartography through his long membership (23 years) of the Executive Committee of the International Cartographic Association (ICA). He was "Mr ICA" and chairman of this association from 1976 to 1984. Because of his diplomacy and his genuine interest in other cultures and particularly in developing countries, he managed to bring about an enormous increase in the number of member states. In view of this contribution to international cartography, but also by virtue of his 150 or more cartographic publications, several cartographic societies in various countries appointed him an honorary member. Of course he also received the highest ICA award, the Mannerfelt Medal.



ICA was an ideal platform from which he could function as one of ITC's most important international ambassadors. We still suspect him of deliberately mixing up ICA with ITC in formal speeches at ICA meetings. Through ICA he also promoted ITC staff and his (former) ITC students, particularly those from developing countries. He involved them in conferences and

brought them into contact with the rest of the cartographic world. In the '70s he was one of ITC's strong pillars and supported the great expansion of the Institute's activities, which came with the move from Delft to Enschede. In recognition of his many merits, he was officially appointed Honorary Fellow of the Institute in 1986.

Prof. Ormeling possessed a very special gift, the ability to fascinate people with his performance and with his words. He was able to make people enthusiastic, to inspire them, and to tie them into common goals. In his work for ITC he made highly constructive use of this gift - to the benefit of this Institute and of our staff and students. We owe him a lot.



Obituary

Henk Scholten (1939-2002)

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Two months after the doctors discovered an incurable variant of cancer in his body, Henk Scholten passed away peacefully at home in Vasse on 27 May 2002. He was only 62 years of age and still led a very active life. Henk was an instructor in the Cartography Department from 1971 to 1996. We are convinced that he left a deep lasting and very positive impression on all the ITC students he introduced to the basic principles of cartographic reproduction and offset printing. We are also sure that he left similar impressions behind in the countries he visited on ITC consulting missions: Venezuela, Ecuador, Iran, Indonesia and, in particular, Bhutan.

Regular readers of *ITC News* who did not know Henk Scholten in person will still be familiar with his name, as once a year this newsletter contains an announcement of a new winner of the so-called Henk Scholten Award. This award is presented to a staff member or student who has fos-

tered and promoted the social and working relationships within the Institute. The award was established on the occasion of Henk Scholten's retirement in 1996 and bears his name because he was the perfect example of a good team player and team builder. Last December Henk was at ITC to present the Henk Scholten Award 2001. There are not many people after whom such an award has been named. Therefore needless to say, the ITC community was shocked to hear of his illness and

death. Even more than five years after his retirement, many ITC staff and students rendered the last honours to Henk Scholten at his funeral. We will miss him a lot.



The team-building capacities of Henk Scholten: who else could have coaxed the entire staff of the Cartography Department to turn out in soccer strip for a match against the cartography students (1980)

News of Our Honorary Fellows

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It is directorate policy to pay due respect to ITC's honorary fellows and consult them on policy issues, and within this framework certain meetings have already taken place this year.

Dr D.P. Rao

Most recently, Dr Rao was appointed Honorary Fellow in December 2000 on the occasion of the 50th Dies Natalis. I met Dr Rao in February this year at the International Workshop on Tropical Forest Cover Assessment and Conservation Issues in Southeast Asia, which was organised by the Indian Institute of Remote Sensing in collaboration with the European Commission Joint Research Centre in Ispra, Italy. Dr Rao retired at the end of 2001 as director of NRSA but is still active in workshops, committees, and the like.

Prof. Dr P. Misra

I met Prof. Misra in February this year at the Map India 2002 Conference in New Delhi, India. He was appointed Honorary Fellow of ITC in 1986. He is the former dean of the Indian Institute of Remote Sensing (IIRS) and former director of the Survey Training Institute. Prof. Misra, who is now 72 years old, is still very active and is working as a consultant with CSDMS in land information technologies. We had extensive talks on ITC's future role in India. He responded most positively to ITC's decentralisation strategy and change of name, commenting that ITC kept well up to date with developments. He strongly recommended that ITC should pay particular attention to capacity building in the context of management, institutional capabilities and raising awareness at the top level of organisations.

Chief R. Oluwole Coker

In April I, together with Prof. Martien Molenaar, met with Chief Coker, who was appointed Honorary Fellow on 17 September 1976 on the occasion of ITC's 25th anniversary. Chief Coker was the first indigenous director of surveys in Nigeria, and served in this capacity from 1963 till 1978.

Chief Coker is now 78 years old. Although he retired 23 years ago, he is still active in the Nigerian Institute of Surveyors and in the Standing Committee of the Regional Centre for Training in Aerospace Surveys (RECTAS), ITC's sister institute in Nigeria.



From left to right: P.S. Rao (Dean IIRS), Sjaak Beerens, Dr D.P. Rao (Honorary Fellow)



Chief R. Oluwole Coker

Alumni Receptions

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Sjaak Beerens

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Following the success of the alumni reception organised in November 2001 in Nairobi, Kenya, in conjunction with the AFRICAGIS Conference, similar events were organised in Dar es Salaam, Tanzania, and Windhoek, Namibia, to coincide with the visit of Prof. Martien Molenaar (rector) and Sjaak Beerens (director external affairs).

Dar es Salaam, Tanzania

During the visit of the ITC Directorate to Tanzania, an alumni reception was organised on the evening of 27 March at the Masasani Slipway, a pleasant sea-side venue at the outskirts of Dar es Salaam. Around 100 ITC alumni attended the reception. A sizable delegation from the Dutch embassy was also present. The reception formed the closing activity of the tour through East Africa. An ILWIS 3.0 package was raffled among the alumni present and the happy winner

was Mr. Mohamed Bakari, staff member of the Surveys and Mapping Division (Ministry of Lands) in Dar es Salaam.

Windhoek, Namibia

In Namibia an alumni reception was organised on Monday, 15 April 2002, at the Omaere Restaurant of the NamPower Convention Centre. Some 30 people participated besides alumni, including representatives from the Ministry of Lands, Resettlement and Rehabilitation, the Polytechnic of Namibia and the Dutch embassy. One person had driven no less than 500 (!!) km to attend the gathering and to meet up with visiting ITC staff and old friends again.

The traditional raffle with ILWIS 3.0 software for the winner was once again a great success. Ms Maria Kasita, ITC alumna and training coordinator with the IT-2 Land Informa-

tion Management project emerged the winner (her daughter being the person to draw the lucky number!).

Photographs of the alumni receptions at Nairobi, Dar es Salaam and Windhoek on the ITC website <http://www.itc.nl>



Tanzania

Windhoek

LETTER TO THE EDITOR

Dear Sirs,

Thank you very much for sending me the ITC News journal regularly. The satellite image that is covering the back of the journal is from my country, I am very happy for that.

For ITC News journal readers, I would like to brief them about the satellite imagery which is covering the central part of the Ethiopian rift valley (the northern part of the East African Rift Valley) that is called "Lakes district". The lakes on the image are; Lake Koka, Lake Zeway, Lake Langano, Lake Abyata, lake Awassa and Lake Shalla

The calderas and craters on the image are; Zokalla crater, Wengi crater, Aluto caldera, Korbetti caldera and Awassa caldera

The area is having the most beautiful scenario that is a place for entertainment and watching natural forest, birds and wild animals, the endemic in particular. In addition to these, it is known for mineral potential, such as diatomite, bentonite, caustic soda,

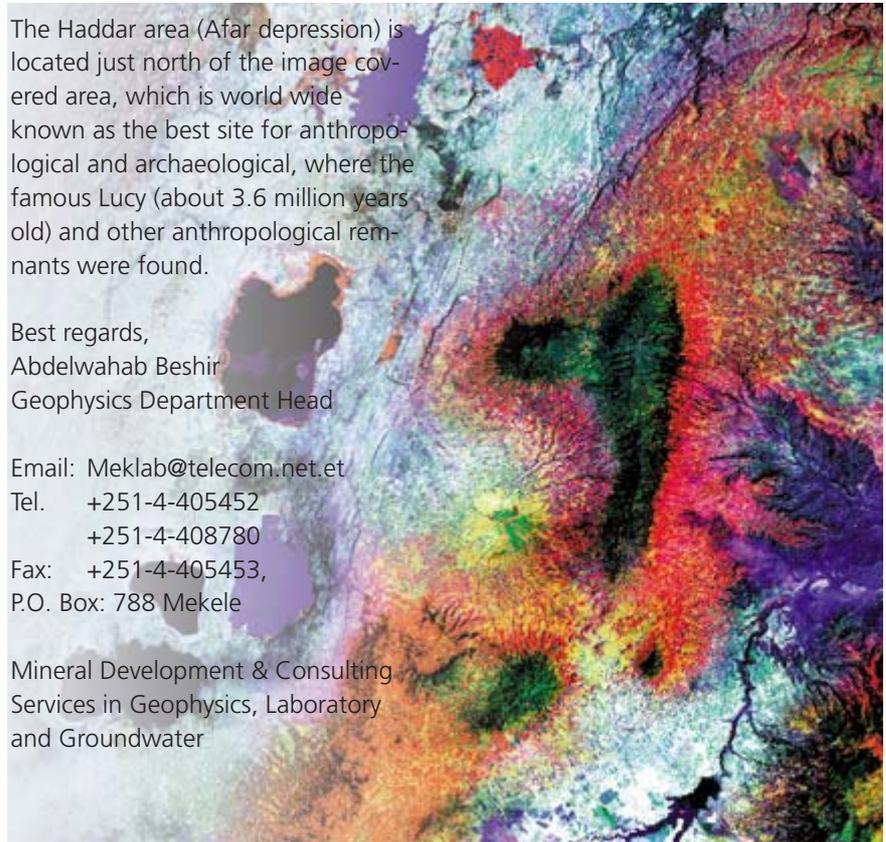
soda ash, basaltic breccia (for rock mulching), pumice, epithermal gold and geothermal energy.

The Haddar area (Afar depression) is located just north of the image covered area, which is world wide known as the best site for anthropological and archaeological, where the famous Lucy (about 3.6 million years old) and other anthropological remnants were found.

Best regards,
Abdelwahab Beshir
Geophysics Department Head

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Mineral Development & Consulting
Services in Geophysics, Laboratory
and Groundwater



CONFERENCE CALENDAR

UN Regional Workshop on the Use of Space Technology for Disaster

1 - 5 July 2002
Ethiopia, Addis Ababa

www.oosa.unvienna.org/SAP/stdm/
e-mail david.stevens@unvienna.org

ESRI Education User Conference 2002

5 - 7 July 2002
USA, California, San Diego

www.esri.com/events/
e-mail educ2002@esri.com
ITC attendance: Lalit Kumar, Lyande Elderink, Mark Noort, Rolf de By

2nd Annual ESRI International User Conference

8 - 12 July 2002
USA, California, San Diego

www.esri.com/events/
e-mail uc2002@esri.com
ITC attendance: Lyande Elderink, Mark Noort, Rolf de By

Geospatial Theory, Processing and Applications

9 - 12 July 2002
Canada, Ontario, Ottawa

www.geomatics2002.org
e-mail exdircig@netrover.com

GIS Ecuador 2002

10 - 12 July 2002
Ecuador, Quito

www.gisecuador.org
e-mail unisig@unisig.epn.edu.ec

SVG Open / Carto.net

15 - 17 July 2002
Switzerland, Zurich

www.svgopen.org
ITC attendance: Barend Köbben

ATB 2002

29 July - 2 August 2002
Panama, Panama City

www.stri.org/atb2002/
e-mail atb2002@tivoli.si.edu
ITC attendance: Hans Ter Steege

Map Asia 2002

7 - 9 August 2002
Thailand, Bangkok

www.mapasia.org/index.htm
e-mail info@mapasia.org

17th World Conference of Soil Science

14 - 21 August 2002
Thailand, Bangkok

www.17wcss.ku.ac.th
e-mail o.sfst@nontri.ku.ac.th
ITC attendance: Abbas Farshad, Bart Krol,
David Rossiter, Dhruva Shrestha

Integrated System for Spatial Data Production, Custodian and Decision Support

20 - 23 August 2002
China, Xi'an

www.isprs2.nsd.gov.cn
e-mail isprs2@nsdi.gov.cn

ISPRS Commission V

2 - 6 September 2002
Greece, Corfu

www.erasmus.gr
e-mail info@erasmus.gr

Geographical Study of Central Asia and Mongolia

6 - 11 September 2002
Mongolia, Ulaanbaatar

www.softwellweb.it/homeofgeography/uk/events/sep020906.asp
e-mail bn@mol.mn
ITC attendance: John van Genderen

ISPRS Commission III Symposium 2002

9 - 13 September 2002
Austria, Graz

www.icg.tu-graz.ac.at/pcv02
e-mail office@icg.tu-graz.ac.at

EUGISES 2002

12 - 15 September 2002
Spain, Girona

www.giscampus.org/eugises2002/
e-mail irene@giscampus.udg.es
ITC attendance: Barend Köbben

GSDI 6 Conference

16 - 19 September 2002
Hungary, Budapest

www.eurogi.org/gsd6/menu.html
e-mail eurogi@euronet.nl
ITC attendance: Ian Masser, Marco Huisman, Niek Rengers, Robert Hack, Siefko Slob, Yola Georgiadou

EADI: 10th General Conference

19 - 21 September 2002
Slovenia, Ljubljana

www.eadi.org/generalconference.htm
e-mail postmaster@eadi.org

GISIDEAS 2002

25 - 28 September 2002
Vietnam, Hanoi

www.gisws.media.osaka-cu.ac.jp/jvgc/
e-mail hmh@netnam.vn

2nd World Space Congress

10 - 19 October 2002
USA, Texas, Houston

www.aiaa.org/wsc2002
e-mail steve.holt@olin.edu

4th International Conference of African Association of Remote Sensing

14 - 18 October 2002
Nigeria, Abuja

www.aarse.org/
e-mail aarse@infoweb.abs.net

VII International Earth Sciences Conference

21 - 25 October 2002
Chile, Santiago

www.igm.cl/cct2002/Ingles/cct2002_in.htm
e-mail cct2002@igm.cl

SPIE's 3rd International Asia-Pacific Symposium

23 - 27 October 2002
China, Hangzhou

www.spie.org/Conferences/Calls/02/ael
e-mail spie@spie.org

IST 2002

4 - 6 November 2002
Denmark, Copenhagen

www.europa.eu.int/information_society/programmes/research/ist_event_2002/index
e-mail info-ist2002conf@cec.eu.int

Space Applications for Heritage Conservation

5 - 8 November 2002
France, Strasbourg

www.eurisy.asso.fr
e-mail eurisy@micronet.fr

European Research 2002

11 - 13 November 2002
Belgium, Brussels

www.europa.eu.int/comm/research/conferences/2002/
e-mail rtd-conference2002@cec.eu.int

GIS Day 2002

20 November 2002
Events will be held worldwide

www.gisday.com
e-mail gisdayinfo@gisday.com

23rd Asian Conference on Remote Sensing

25 - 29 November 2002
Nepal, Kathmandu

www.acrs2002kathmandu.gov.np
e-mail info@acrs2002kathmandu.gov.np
ITC attendance: Martien Molenaar, Paul Schoonackers, Sjaak Beerens

ISPRS Commission VII Symposium

3 - 6 December 2002
India, Hyderabad

www.commission7.isprs.org
e-mail isprstcvii@nrsa.gov.in
ITC attendance: Andrew K. Skidmore, Iris van Duren, Jelle Ferwerda, Kees de Bie, Martien Molenaar, Sjaak Beerens, Yola Georgiadou

ASPRS 2003

3 - 9 May 2003
USA, Alaska, Anchorage

www.asprs.org/alaska2003/index.html
e-mail teidel@gci.net

5th Hutton Symposium on the Origin of Granites and Related Rocks

2 - 6 September 2003
Japan, Toyohashi

www.gsj.jp/Info/event/hutton
e-mail Hutton-V@m.aist.go.jp

XXth ISPRS Congress

12 - 23 July 2004
Turkey, Istanbul

www.isprs2004-istanbul.com
e-mail oaltan@srv.ins.itu.edu.tr