content

2005 number 2

introduction

Welcome to *ITC News 2005-2*! As befits its time of publication, this issue with its mixed bag of articles reflects an academic year in full swing. Plans, projects and activities, you'll read about them all here, and at the same time keep your finger on the pulse of the Institute and an eye on the paths of its students.

There are reports on special courses held around the world, and the one on the refresher course conducted in Bolivia (page 26) certainly makes enjoyable reading, coming, as it does, complete with a contribution from the participants themselves. Their enthusiasm is infectious and you may find yourself scanning the varied list of short courses scheduled for the year 2006 (page 12) with added interest. But, as we all know, it's not always easy to down tools and head off for the nearest ivory tower - which is why ITC education in distance format is gaining in range (page 9) and popularity.

It's nearly two years ago that ITC hosted the first international workshop on joint educational programmes, and a wealth of experience in designing, preparing, organising and running such programmes has been built up in the meantime. Surely the time has come to organise a second workshop? Well, yes, it has, and you can read more about this on page 19. And while we're on the subject of joint programmes, page 20 reports on a successful outcome in this respect in China - although the photographs actually say it all.

So the ITC alumni network has grown that much bigger yet again, and the string of alumni associations is also increasing in accordance with demand (page 24). If you and a few colleagues feel the urge to set up such an association in your own country or region, but are somewhat at a loss as to how to begin, help is at hand on page 25.

You may think we at *ITC News* are among the less technologically inclined of the ITC staff. And you may be right at that. Dealing in paper and the printed word, whatever next! But the article on global positioning systems (page 5) even caught our imagination and the day may well come when we surreptitiously join that growing band of hobbyists. How about you?

Wishing you all an enjoyable read,

Janneke Kalf
Managing Editor

colofon

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Generalisation within National Mapping Agencies

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Generalisation has been a popular research topic since the birth of geo-science. This has yielded interesting results. But what is the state-of-the-art of generalisation in practice? Do national mapping agencies (NMAs) profit from research results? And which topics need more attention?

To answer these questions a generalisation workshop was organised on 31 March and 1 April 2005 at ITC (see Figure 1). The workshop was attended by 12 NMAs: from Belgium, Catalonia (Spain), Denmark, France, Great Britain, the Netherlands, Ireland, Sweden, Switzerland, and three Bundesländer from Germany: North Rhine Westphalia, Baden-Württemberg and Lower Saxony.

In this article the most important outcomes of the workshop will be described. First the generalisation process within the participating NMAs will be summarised, and then at the end the research topics will be outlined that need further attention in order to better serve practice.

Generalisation in practice

All participating NMAs maintain vector datasets at different scales in order to support their production processes (see Figure 2 for the French example). Either one seamless database is maintained per scale or several databases are maintained for one scale based on (old) map sheets (one database per map sheet). All NMAs are restructuring (or have restructured) their existing datasets into data models that meet today's requirements of geo-information, such as data delivery within an SDI (spatial data infrastructure), history management, unique IDs, object-oriented datasets, and datasets no longer divided into map sheets.

Generalisation has been an important concept in NMAs since the availability of digital products. Already smaller-scale datasets are updated based on generalising the updates from the base dataset. The new approach followed by all NMAs is to maintain currently available datasets and update the smaller scales by generalising the updates from the base dataset. This means that generalisation within NMAs focuses mainly on the generalisation of updates. Dynamic generalisation (in which a smaller-scale dataset is produced dynamically on demand) is not considered realistic in the near future because of the interaction expected to be still required. Nor is generalisation functionality that provides the possibility of producing datasets at any required scale, instead of datasets at predefined standard scales, feasible in the near future.

All participating NMAs recognise the importance of reconsidering current production processes in order to introduce automatic generalisation (or at least as automatic as possible). However, during the workshop it was concluded that, because of the complexity of the generalisation processes, even in the new production processes generalisation will still need human interaction (see Figure 3).

Of the 12 participating NMAs, seven have made more fundamental steps towards automatic generalisation: Denmark, Catalonia (see Figure 4), all the Bundesländer from

Figure 1 Workshop participants listening to a presentation from Sweden

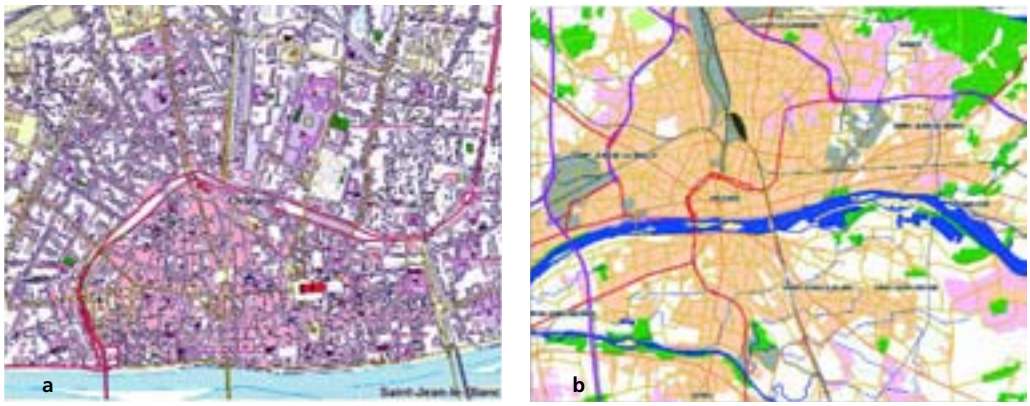

Figure 2 Topographic base datasets (displayed at reduced scale) maintained by the French NMA: BDTopo, scale ~1:10k (a) and BDCarto, scale ~1:50k (b)

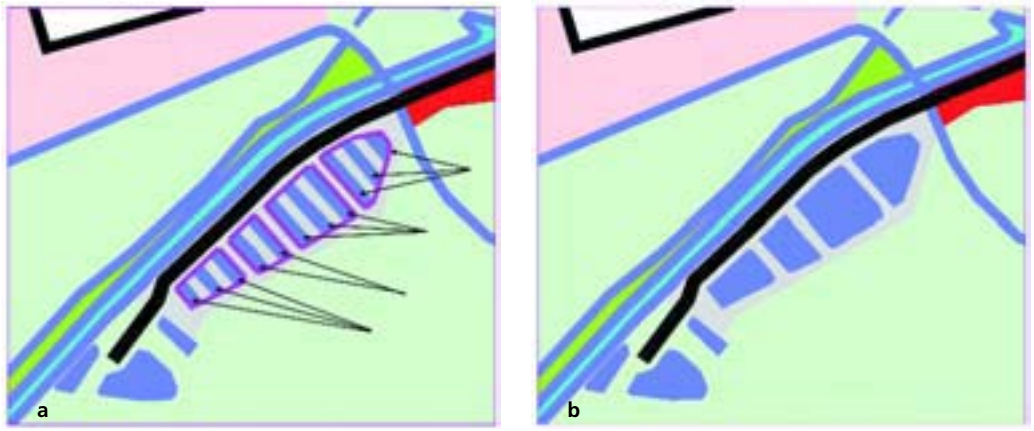

Figure 3 In some Bundesländer in Germany, the ponds are aggregated in such a way that the style of the landscape is maintained. The ponds that should be aggregated are identified (a) and aggregated (b). In other Bundesländer, the ponds are eliminated in an automated generalisation process because each individual pond is

Germany, France and Great Britain.
Automatic generalisation in Great Britain has until now only been successfully implemented in a research environment (prototypes) and has not yet been introduced in the production line. The other participating NMAs (Belgium, Ireland, the Netherlands, Sweden, Switzerland) are also faced with requirements for automatic generalisation in order to provide major improvements in the production line. So far, however, these NMAs have not allocated sufficient resources to the problem. They are in the phase of addressing other fundamental problems, such as converting existing map-sheet-based datasets into seamless databases.

Research needed to improve current generalisation practice

The second important question of the workshop was: What research is needed to improve current generalisation practice? During the workshop discussions, it was concluded that research results realised during the last decennia have not always found their way into practice for three main reasons.
First, results have to be implemented in commercial software to become available for NMAs. However, generalisation requirements are very diverse and NMA-specific, dependent on data models, software, scales that have to be produced, specifications of different scales, etc. It might be hard for software vendors to provide a general off-the-shelf solution while taking individual NMA demands into account.
The second reason for the difficulty in introducing research results into practice relates to the robustness requirements. Robustness is a specific problem in automatic generalisation, since generalisation is applied to existing datasets that may contain errors or have limitations with respect to today's requirements of geo-information (e.g. topology; object orientation; lack of information on semantic, geometrical and topological relation-

Information about the author

Jantien Stoter (1971) graduated in physical geography at Utrecht University in 1995 before beginning her career as a GIS specialist with the District Water Board of Amsterdam (1995-1997). From 1997 till 1999, she worked as a GIS consultant at the Engineering Office of Holland Rail Consult. Jantien Stoter's university career started in 1999 as an assistant professor in GIS applications, section GIS technology, in the Department of Geodesy, Delft University of Technology. In September 2004, she finished her PhD on 3D cadastre. In February 2004, she received the Professor J.M. Tienstra Research Award for her work. This award (given every five years) was established by the Netherlands Geodetic Commission (NCG) to promote geodetic research in the Netherlands. Since April 2004, she has held the position of assistant professor at the Department of Geo-information Processing at ITC. Her main research and education responsibilities are generalisation of geo-information and multiscale databases.

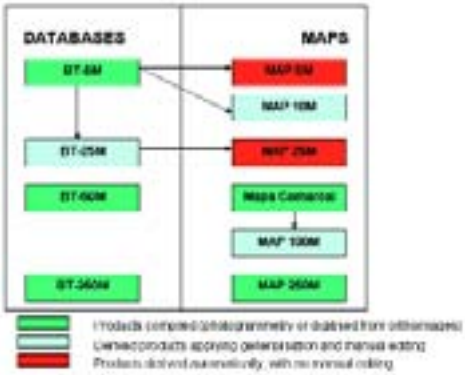

Figure 4 Generalisation workflow in Catalonia

ships between objects that is needed to avoid conflicts in generalisation).

The last reason is the subjectivity of generalisation. If two cartographers are given the same generalisation rules for the same area, they will reach different results. Exceptions are common in the generalisation process and specifically the interchange and the sequence of generalisation rules are extremely important. Generalisation processes are therefore not easy to translate into an ordered set of "if … then ... else" rules that can be understood by computers. When formalising generalisation rules a "but" clause is needed for the (frequently) occurring exceptions, which will not be easy to formalise.

Nonetheless, during the workshop a list of topics that need more attention was drawn up (see Box 1). Here we will not answer the question whether these topics should be addressed by software vendors or by the research community.

Generalisation research at ITC

The results of the workshop will be used to direct the generalisation research in the Department of Geo-information Processing. It is important to note that the research issues were defined by the NMAs and based on daily problems. This means that the topics are practice-oriented, aiming at solving generalisation problems in the near future. For science, it is a challenge to continue and also intensify investigation into more ambitious and more fundamental problem areas, such as formalising generalisation output, dynamic generalisation and generalisation within a continuous scale range, data structures and data models that are specifically suitable for both applying generalisation algorithms and for managing multi-representations, multi-representation databases based on true object-oriented DBMSs, etc.

Currently we are starting a project aimed at solving a practice-oriented problem with fundamental solutions. This research project focuses on generalising base maps for integrated querying of digital physical plans at different levels (municipal, provincial and national). The project will be carried out mainly by two PhD students: one will study the user aspects of generalisation and the other will work on the technical aspects of generalisation. The project is subsidised by the research programme Space for Geo-Information. Apart from this project, we will start to collaborate in the area of generalisation with the Dutch NMA. With the know-how gained in these projects, we may serve other customers as well.

The following essential research topics were identified during the workshop:

- A system that contains a comprehensive and wide approach to generalisation functionality (for both geometry and attributes) that takes the context (e.g. mountains, rural, urban) and relationships between objects (e.g. a building area cannot overlap road area) into account.
- General generalisation functions that are adaptable to various data models that contain existing datasets; this means that:
  - implicit data should be made explicit by developing ontologies and formalising semantics
  - current databases need to be enriched (i.e. information necessary for generalisation should be added, such as shape characteristics, object density and distribution, relative importance of objects, semantic and topological relationships between objects)
  - algorithms in software should work on different data models
  - knowledge of cartographers needs to be (further) formalised
- Support for multi-representation databases to interrelate datasets at different scales
- Generalisation of contour lines
- Generalisation of map names
- Intersubjective, repeatable and quantitative methods to evaluate generalisation results

New GPS Receivers at ITC

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Over the past few years, the use of the GPS system for various positioning purposes has shown a tremendous increase. When using a single GPS receiver, however, the accuracy is still limited to +/- 10 m.

If a higher degree of accuracy is desired, two (code) receivers (which store the pseudorange measurements, not only the calculated coordinates) should be used. In this way, it is possible to achieve an accuracy with differential GPS (DGPS) of 0.4 to 0.5 m, and with measurements of two phase receivers an accuracy of 1 cm + 1 ppm. In contrast to post-processing methods, real-time kinematic (RTK) measurements give the result (coordinates and the accuracy obtained) immediately. It is not surprising, then, that the number of DGPS and RTK measurements obtained using two receivers is steadily increasing. But setting up and safeguarding a reference station each time is both costly and time-consuming.

LNR Globalcom has developed a network of reference stations (GlobalNET) whereby GPS users can access accurate quality-controlled GPS data 24 hours a day. This allows users to measure with two-receiver accuracy while operating only one rover receiver. One of the GlobalNET reference stations is located on the roof of the ITC building. ITC is able to make a GSM connection to this reference site with either of the two rover receivers that they have purchased, and so can easily carry out GPS measurements achieving an accuracy of 1 cm!

This site offers some major benefits. The reference coordinates are continuously quality-controlled, and ITC can carry out measurements in the vicinity of Enschede using both receivers as rovers, without wasting time setting up and safeguarding a reference receiver. Furthermore, using the two receivers and GlobalNET, ITC can increase not only

ITC is able to make a GSM connection to the GlobalNET reference stations on the roof of the ITC building, thus easily carrying out GPS measurements to an accuracy of 1 cm!

The GlobalNET reference stations on the roof of the ITC building

production but also the number of students who are able to work with the GPS - a winning combination!
The question remains: "What is the exact position of the GPS antenna on top of the ITC building?" I'm frequently asked about the correctness of coordinates produced by a GPS receiver, and why there are so many different coordinate systems. Each system has its own merits and is the best choice for a given application. Hence every fixed point in the Netherlands has several well-defined coordinate "triples".

The most common systems are:

- RDxyh — the *Rijksdriehoekstelsel* (x,y wrt the Bessel ellipsoid and h wrt the NAP surface), (x,y) with stereographic projection
- RDllh — idem, but with lat, lon on the Bessel-ellipsoid and height above it
- ED50xyh — the European Datum ED50 (wrt the Hayford (=international) ellipsoid) with utm projection
- ED50llh — idem but with lat, lon, height on the Hayford
- WGSxyh — the worldwide WGS84 datum (wrt the GRS80 (WGS84) ellipsoid), also with utm projection
- WGSllh — idem but with geodetic lat, lon, height on the WGS84
- WGSxyz — the geocentric (cartesian) system of three perpendicular axes (XY plane is the equator plane, Z axis is the rotation axis of the Earth).

On topographic maps of the Netherlands (map series 1:25,000), you can read the coordinate systems RDxyh, RDllh and WGSxyh (RDxyh and RDllh printed in black and WGSxyh (until 2002 this was ED50xyh) in blue). This is useful information for GPS hobbyists if their hand-held system does not recognise RD coordinates.

Below you can find the "triples" respectively in RDxyh, WGSxyz and WGSllh for the GPS antenna on the roof of the ITC building. These were produced by GlobalCom in March 2005.

RD and NAP	257425.6505	471676.3198	64.0127
WGS84 cartesian	3887142.4210	469451.7020	5018170.1120
WGS84 geodetic	52°13'25.09068" N	6°53'10.61837" E	107.5637

These coordinates can be easily converted from one type to the other by using ILWIS or Coordinate Calculator (www.rdnap.nl).

One possible conclusion: *Only when the sea level rises by at least 64 m will our building be completely inundated.*

education news

Special Training Course in Environmental and Urban Planning

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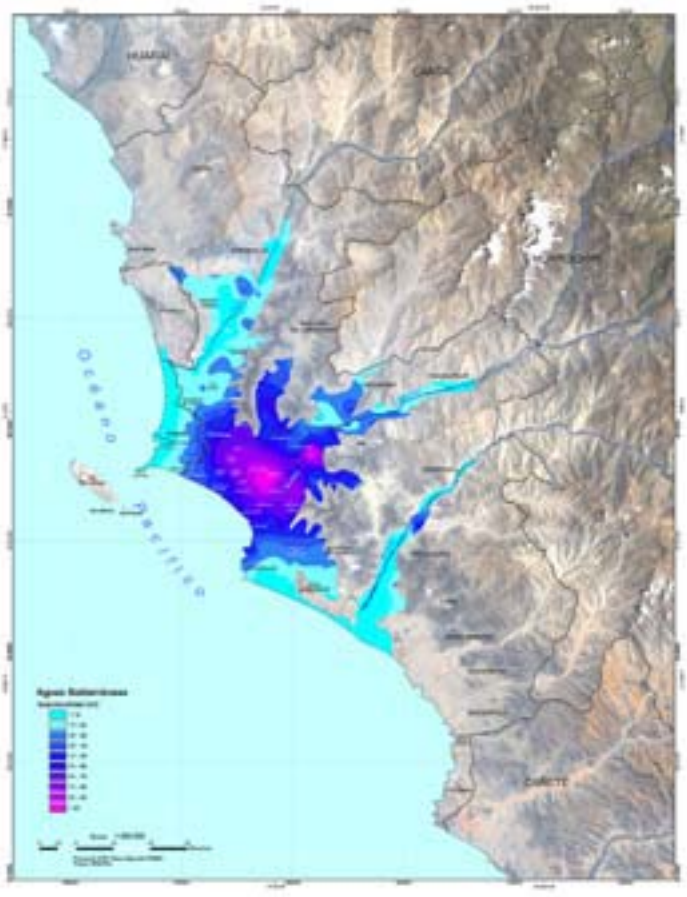
From November 2004 to November 2005, a special training course on GIS and remote sensing applications for environmental and urban planning is taking place. The course has been designed for 20 staff members from 18 organisations in Lima, Peru. These organisations are involved in different aspects of urban environmental management and need to deal with urban environmental information.

The main purpose of the course is to provide the participating organisations with the necessary knowledge and skills to enable them to develop an urban environmental atlas of the city of Lima, and to assist them in developing and maintaining spatial information systems that can be used in integrated urban environmental management. The course consists of three phases:

- In the first phase (in Lima), basic GIS training was given, the thematic content of the urban environmental information system was discussed and decided upon, base data layers were created, and thematic layers were developed. Furthermore, possibilities for intra-organisational cooperation and database creation were discussed in a separate workshop.
- In the second phase (at ITC in Enschede from 18 April to 18 June), training courses were given on GIS and cartographic aspects of atlas production, as well as urban environmental information system development.
- The third phase (again in Lima) covers the completion and presentation of the atlas, the development of educational material for secondary schools, and the formulation of inter-organisational initiatives for developing an urban environmental information system for Lima.

The course participants and ITC staff



Tailor-made Course in GIS and Remote Sensing in Bhutan

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During 2005, ITC is delivering a tailor-made training course on GIS, remote sensing and geo-information management topics to members of the Department of Geology and Mines (DGM) of the Royal Government of Bhutan. The course has been developed jointly with the Geologic Survey of India Training Institute (GSI/TI) and contains several modules.

The first module, Introduction to GIS, was taught entirely by GSI/TI staff in Hyderabad. Five participants from Bhutan travelled to India to attend this module introducing them to the fundamentals of geographical information systems. The second module was held at the DGM facilities in Thimphu, Bhutan. It covered more advanced GIS techniques, including the creation and use of digital terrain models, as well as knowledge- and data-driven predictive modelling for mapping mineral potential. The course material was developed and implemented by a team composed of GSI/TI staff members and Dinand Alkema and John Carranza from the ITC department Earth Systems Analysis.

ITC's Karl Grabmaier went to DGM in Bhutan for the third module. He introduced the participants to the fine details of high-accuracy differential GPS measurements for a wide variety of applications, ranging from land surveying to field mapping campaigns. The fourth module was also given in Bhutan and focused on remote sensing. Chris Hecker, Norman Kerle and Michiel Damen took the participants through the principles of remote sensing, with a focus on Bhutan's geographical position and morphological conditions. The module concluded with a one-week project in which the participants brought all their new skills to bear on a real-world scenario from the Bhutanese Himalaya.

After a summer break, a delegation of eight DGM staff members will travel to ITC in Enschede to follow the fifth and final module, with topics on advanced GIS and remote sensing techniques, and the management of geo-information technology in the institutional DGM setting.

This project is a prime example of ITC's role in capacity building and institutional strengthening for geological survey departments worldwide. In fact, until recently GSI/TI staff members themselves received training from ITC under the INDIGEO project. Towards the end of 2004, the continuation project INDIGEO II was officially approved, whereby GSI/TI and ITC continue to work together but now as partners. It is remarkable how this organisation has developed its capacity and skills and is now collaborating with ITC in providing training for other institutions.

This training is funded by the Netherlands Fellowship Programme (NFP-TP), as were the courses in drilling engineering and geochemical laboratory analysis delivered earlier this year by Boudewijn de Smeth in ITC's geochemical laboratory in Enschede.

Course participants of the remote sensing module in Thimphu, with (from left to right) ITC's Chris Hecker, Dr Hans van Noord and Dr Norman Kerle

Chinese Meteorological Administration at KNMI

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Six Chinese participants from the Chinese Meteorological Administration (CMA) are following a special six-month (23 January to 23 July 2005) programme of selected modules at ITC. This is the second group from the CMA: two years ago three participants followed a similar programme.

A special request was made to pay at least one visit to the Royal Dutch Meteorological Institute (KNMI). This was organised on 19 April to the great satisfaction of all. From the Chinese perspective, the KNMI is comparable to a meteorological centre at provincial level - where most of the participants actually work. They were particularly interested in the computer system used, how accurate weather forecasts are made, how information is exchanged with other meteorological agencies or institutes, and how climate change is observed and analysed.

The six CMA participants with their supervisor in front of the old and new KNMI buildings

Explanation in the "weather room", where the forecasts are mad

The CMA group in front of the entrance to the KNMI building, on the "edge of a depression"

One of the participants impersonating the Sylphide, the air spirit from Celtic and Germanic mythology that symbolises meteorology

Distance Education

Family commitments, job commitments, and technological developments in your field show no sign of abating. Juggling talents are definitely called for. What's the solution? ITC offers several of its degree and short courses in the distance education format - offering you the opportunity to please your family, please your employer, and please yourself.

Short courses at a distance

Some popular short courses are offered in this format, combining self study and extensive online support by ITC staff, and the following are scheduled for the academic year September 2005–July 2006:

- Principles of Remote Sensing (7 November to 16 December 2005)
- Principles and Applications of Geographic Information Systems (spring 2006)
- System Architectures for Geo-Information Services Provision (spring 2006)
- Developing GIM Strategies in a Geodata Infrastructure (GDI) Context (spring 2006)
- Environmental Impact Assessment (spring 2006)
- Decision Support Systems (spring 2006)
- Introduction to Dynamic Remote Sensing (spring 2006)

Each short course is based on a module in one of ITC's degree courses. Successful completion of the short course will lead to exemption for that module in the degree course.

MSc research at a distance

MSc course participants who meet the requirements set by the ITC course management can spend five months of the six-month thesis period in their home country, with supervision provided at a distance.

For more information:
www.itc.nl/education

New Developments in ITC's Educational Programmes

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The ITC educational set-up will be evolving in different ways with effect from the academic period 2005-2006.

First of all, Dutch law has recently changed and now allows only MSc and Master degrees; consequently, it has been decided to change the name "Professional Master" to "Master of Geo-information Science and Earth Observation".

The professional orientation remains but we consider the adjusted degree name to be more internationally recognised. By splitting the student groups at an early stage and by focusing more on the specific orientation of each programme, ITC is also striving to distinguish the professionally oriented Master degree programme more clearly from the academic MSc degree programme.

Another new development is the shift from a Professional Master to a shorter Postgraduate Diploma course in some ITC programmes, for example, the Applied Earth Science (AES) programme (the former Earth Resources and Environmental Geosciences (EREG) programme), starting in 2005, and Urban Management (UPLA) programme (the former Urban Planning and Land Administration (UPLA) programme) and the Water Resources and Environmental Management (WREM) programme, starting in 2006. This nine-month Postgraduate Diploma course caters for professionals who need to specialise in their field of discipline, solve problems by using existing methods and techniques, and manage (multi)disciplinary teams. The course aims at professionals with limited time available to participate in postgraduate education. Two thirds of the course is the same as the MSc course but the last part is dedicated exclusively to a final "fieldwork" project.

Short Courses in Participatory Spatial Planning – PGIS and Community Mapping

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Two short courses in participatory spatial planning, with the emphasis on community mapping and PGIS, were given jointly by ITC and the Institute of Geography, UNAM, in Morelia in January and February 2005.

The first course focused on applications of PGIS to community-based natural resource management and integrated landscape planning, and the second course applied PGIS to land use conflicts in the urban fringe. Coordinators of both courses were Mike McCall (ITC) and Narciso Barrera Bassols (UNAM). Jeroen van de Worm (ITC) and Jeroen Verplanke (ITC) each joined one course.

There were many inputs from the Institute of Geography, as well as from other UNAM departments and other Mexican and Michoacán institutions, including CIECO, INE, CONAFOR, CIESAS and SUMA, with special assistance from Arturo Garrido (INE and ITC alumnus). The government of Michoacán provided much practical and financial support, which included logistics and fieldwork arrangements, with the Minister of Environment chairing a roundtable discussion. Both courses provided instruction in participatory use of mobile GIS, and the first included innovative visualisation approaches. They have acted as models for forthcoming ITC-UNAM JEP modules, not only as regards content but also in terms of participation, intensive training approach, and pedagogics. The activity and initiative of the participants were very positive.

Both courses were well attended by participants from seven institutions in Mexico and overseas (Spain, USA,

Community mapping of crime spots, Punhuato, Morelia (photo R. Maneja)

Ecuador, France, China, Colombia), and 60% of these participants were female. Full attendance was easily achieved even with a minimum of promotion, with requests for follow-up and dedicated courses, which implies a high level of demand interest - as also reflected in a national newspaper article.

Using a pilot 3D model to locate sacred sites in S. Nicolas, Michoacan (photo M. McCall)

Fieldwork was an integral part and took place in remarkable locations. The first consisted of three days with the indigenous community of San Juan Parangaricutiro, which is also the site of Tancitaro National Park and Paricutin volcano. Groups worked with the following topics: local spatial knowledge of cultural sites and environmental values; eco-tourism potentials; and forest management and zoning for the people's Forest Co-op. The urban fieldwork was carried out on the fringe of Morelia city, where land use conflicts over alternative land uses - mainly conservation versus low-cost housing versus commercial developments - have serious implications for social stability and environmental hazards. This fieldwork also received valuable assistance from local institutions, both government and NGO.

Children in Punhuato, Morelia, enjoying GPS and mobile GIS (photo A. Garrido)

The forestry PGIS group, with Paricutin volcano behind (photo M. McCall)

New MSc Programme on Integrated Landscape Management, Morelia, Mexico

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A new cooperation programme is shortly to start between the Geography Institute, Universidad Autónoma de México (UNAM), Morelia, Mexico, and ITC. As of September 2005, the UNAM Geography Institute will be offering a new MSc degree programme on integrated landscape management.

This joint MSc programme will focus on providing conceptual scientific principles and practical tools and methods needed to achieve sound landscape management. Social, earth and biological sciences, all within a geographical framework, have been integrated into the programme in order to fill the present gaps in information and skills.

For more information on this MSc programme starting in September in Morelia, please visit the website at http://indy2.igeograf.unam.mx/ua-morelia/posgrado.html.

Apply Now for ITC's Short Courses 2006!

ITC offers short courses of varying duration. An overview of these courses is given below.

Some popular short courses are offered in distance education format as well. For an overview of these course see p.9 of this issue of *ITC News*.
You can also create your own individual study programme by selecting one or more of the regular modules. Modules have a duration of three weeks and are all open to individual subscription.

For detailed descriptions of the short courses and individual modules, we would refer you to our website www.itc.nl/education. You can also contact the Short Course Coordinator at education@itc.nl

Title	Period	Duration	Tuition fee (in euros)	Application deadlines NFP	Regular
Advanced geo-information and earth observation for problem solving in applied earth sciences	3 Jan-24 Mar 2006	12 weeks	2,500	1 Sept 2005	3 Nov 2005
Applications of GIS in urban management (urban planning, land administration and infrastructure management)	3 Jan-24 Mar 2006	12 weeks	2,500	1 Sept 2005	3 Nov 2005
Geo-information infrastructure and core data providers	3 Jan-24 Mar 2006	12 weeks	2,500	1 Sept 2005	15 Nov 2005
GIS and remote sensing for natural resource management	9 Jan-31 Mar 2006	12 weeks	2,500	1 Sept 2005	9 Nov 2005
Geo-information for biodiversity conservation	9 Jan-31 Mar 2006	12 weeks	2,500	n.a.	9 Nov 2005
Geo-tools for water resources management with three specialisations	13 Feb-12 May 2006	13 weeks	2,500	1 Sept 2005	13 Dec 2005
Spatial planning and decision support systems: multicriteria evaluation techniques and scenario development	23 Mar-17 May 2006	8 weeks	2,000	1 Nov 2005	1 Feb 2006
Advanced use of remote sensing in water resource management, irrigation and drainage	27 Mar-23 June 2006	13 weeks	2,500	1 Nov 2005	27 Jan 2006
Concepts and skills in applied earth sciences research: development of a personal academic attitude with four specialisations	27 Mar-23 June 2006	13 weeks	2,500	1 Nov 2005	1 Feb 2006
Formulating and managing GIS projects	30 Mar-17 May 2006	7 weeks	2,000	1 Nov 2005	31 Jan 2006
Environmental impact assessment (EIA) and strategic environmental assessment (SEA) using spatial decision support tools	24 Apr-12 May 2006	3 weeks	1,000	1 Nov 2005	15 Feb 2006
Development of organisations in a geo-information infrastructure environment	24 Apr-2 June 2006	6 weeks	1,500	1 Nov 2005	24 Feb 2006
Principles of spatial data handling: databases, GIS and remote sensing	2 Oct-22 Dec 2006	12 weeks	2,500	1 Jun 2006	1 Aug 2006
Principles and applications of remote sensing and GIS for various applications (applied earth sciences, natural resource management, urban management, water resources management)	2 Oct-22 Dec 2006	12 weeks	2,500	1 Jun 2006	1 Aug 2006

In addition to the wide range of standard courses offered, ITC frequently provides training courses specifically designed to meet customers' capacity-building requirements. These courses are conducted in the Netherlands or in the recipient's country or region. More information about (short) tailor-made training courses can be found on our website www.itc.nl/projects.

project news

ITC Expands Links with UN-Habitat, Nairobi

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Over the last 12 months, ITC has been expanding its links with the UN Human Settlements Programme (UN-Habitat; see www.unhabitat.org for details), which has given rise to several new activities that will be undertaken in 2005 and 2006. UN-Habitat is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all, and has long been recognised as an important point of reference for several groups within the PGM department.

In 2004, Dr Jan Turkstra was seconded to work at the Global Urban Observatory (GUO) of UN-Habitat for several months. Dr Turkstra worked on developing methods of identifying slums from satellite data and GIS-related training materials for GUO partners. This work was very well received and he is currently working for UN-Habitat on a 12-month contract in Libya and Somalia.

In April 2005, ITC participated in a meeting of UN-Habitat's Governing Council. During the meeting, Dr Richard Sliuzas and Dr Luc Boerboom conducted a special session on GIS and planning support, which was hosted by the GUO section. Together with Mark Noort (head of ITC's Marketing and Project Services), they also had several meetings and discussions with UN-Habitat staff and delegates.

In the coming months, several activities are to be developed that are expected to culminate in the World Urban Forum III meeting in Vancouver 2006 - 30 years after the inaugural HABITAT meeting that was held in the same city in 1976. The first activity involves assisting GUO in preparing the visualisation of changes in global slum conditions for the Millennium Summit to be held in New York in September 2005. Dr Connie Blok (GIP) and Dr Richard Sliuzas (PGM) are the main people involved in this work. A larger but related project sees ITC assisting GUO in preparing some scenarios of urban development that are related to global efforts towards the Millennium Development Goals, and in particular Target 11, which concerns improving the lives of slum dwellers (see http://www.unmillenniumproject.org). It is intended to carry out this work as a research project involving staff of the PGM and GIP departments. Please watch out for updates on our link with UN-Habitat in future issues of *ITC News*.

We would welcome your contributions for the special jubilee issue of ITC News.

At congresses, conferences and seminars the world over - in fact wherever those with past or present associations with ITC come together - we hear the cry for more news of ITC alumni. The readership is out there but it's you we need. Could you help us to meet this demand? … and maybe, at the same time, take the opportunity to renew old friendships.

In issue 2005-3, we publish stories of ITC alumni (max. 1000 words) reflecting on 55 years of ITC and/or writing about their present work experience, the effects of their study at ITC, their current interests and their suggestions for changes.
Please do not forget to:

- include at least one (high-resolution 300 dpi) photograph of yourself
- mention your course and study year and - to stimulate interaction -
- how you can be contacted.

Your article could be another step towards making ITC News a lively forum for the exchange of news and views from around the globe.

So why wait?

If you would like to contribute to this special issue
please write to or preferably e-mail (itcnews@itc.nl)
Janneke Kalf, Managing Editor: ITC, P.O. Box 6, 7500 AA Enschede, The Netherlands.
Deadline for submission is 14 October 2005.

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research news

Earthquake Prediction Research (EQPR)

M.V. Ramanamurthy, India rmy-pranav@sancharnet.in

The Earth's crust is a dynamic grid with mobile (floating) tectonic plates, referred to as the continental drift, resulting in subduction and abduction zones, ocean-floor spreading, etc. These plate movements cause earthquakes.

The earthquake and volcanic zones are known, and new seismic zones are emerging. Earthquakes generate primary and secondary waves; secondary waves only cause damage. Earthquakes with a magnitude greater than 6 on the Richter scale are dangerous. Huge reservoirs of energy (pressure, strain, stress, thermal, etc.) accumulated slowly over the years in the Earth's interior are suddenly released as earthquakes and volcanic eruptions. Earthquakes can be natural or induced.

Utilising modern technological developments, seismologists and seismic engineers are adopting a cardinal multidisciplinary comprehensive integrated strategy to predict the precursors of imminent earthquakes. Preseismic, co-seismic and post-seismic events can be monitored with the aid of space, air and ground systems, as energy precursors are now identifiable, detectable and measurable.

Our current need is for automated online systems to detect precursors and predict imminent earthquakes at least three days in advance, and a wake-up call has gone out to the scientific community. Recent advances in prediction research are encouraging, and the cost-benefit analysis envisaged in this R&D endeavour is beneficial, with patent rights being the reward for success.

The prediction precursor technique consists of a three-tier system:

	In advance
1. Macro range:	
• Astronomical:	years before
• Geomagnetic field change	6 to 8 months
• GPS (geodesy and geodetic measurements)	3 to 6 months
2. Meso range:	
• Radar	1 to 2 months
• Thermal IR	1 day to 2 months
• Tidal generation forces resonance	15 days to 2 months
3. Micro range:	
• Budgerigar jump frequency	7 to 13 days
• Gravity	5 to 6 days
• Infrasound	1 to 9 days
• Geoelectrical pulse	2 to 9 days
• Crustral strain	1 to 3 days
• Geomagnetic field change affects television and wireless communication (TV, land & cell phones)	50-100 minutes to few hours and months

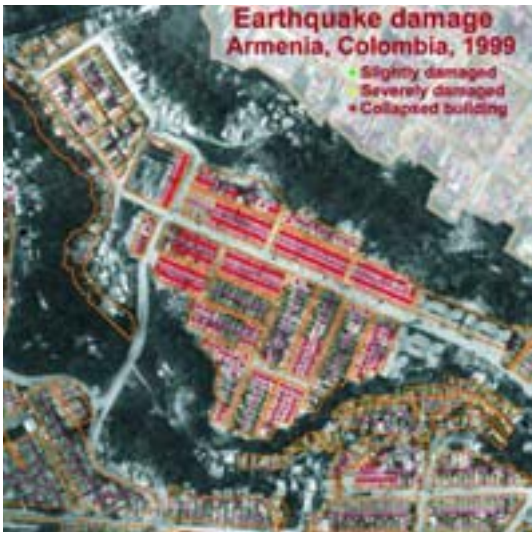
Public education, seismic-proof and tsunami-safe constructions, the development of a tsunami early warning system and public early warning communications, real-time emergency services, and disaster relief and management should all be accomplished. Furthermore, a global seismic policy and a seismic audit are necessary. Chinese earthquake predictions are excellent, with the error range being insignificant. The establishment of the UN University's Associated Institutions of EQPR Centers of Global Scientific Excellence in various countries is needed in this human endeavour.

Training in EQPR

EQPR training facilities are available at ITC in the Netherlands. For more information, please visit the website (http://www.itc.nl/education) or contact the Institute directly (education@itc.nl).

Acknowledgement

These notes are based primarily on material supplied by Professor J.L. van Genderen of ITC, for which the author is immensely grateful.



Earthquakedamage map produced at ITC

Best Conference Paper Award for Chudamani Joshi

Chudammani Joshi joshi@itc.nl

Chudammani Joshi, a PhD candidate under the supervision of Professor Andrew Skidmore, Dr Jan de Leeuw (NRS department) and Professor Jelte van Andel (Groningen University), won the award for best paper on remote sensing and the award for second-best conference paper at the 8th AGILE Conference on Geographic Information Science held in Estoril, Portugal, from 26 to 28 May 2005.

The paper, entitled "Application of remote sensing and GIS in mapping and management of invasive *Chromolaena odorata* in Nepal", describes a novel technique for mapping one of the world's worst invasive species in the forest understorey of the Royal Chitwan National Park, Nepal. The study is critical for a better understanding of ecology and invasion patterns of *Chromolaena odorata.* This study shows that a combination of remote sensing imagery and GIS could be well applied to segregating reproductive and non-reproductive populations of this species. Localisation of such populations could significantly reduce eradication/control costs. This may prove particularly valuable when implementing control measures under circumstances of limited capital and manpower.

Author's biography

Chudammani Joshi studied biology and chemistry at Lucknow University, India, where he graduated in 1985. After graduation, he joined the Ministry of Forest and Soil Conservation, His Majesty's Government of Nepal, where he is currently employed as a plant resources officer. In 1989, Joshi also graduated in legislative law from Lucknow University. He pursued his studies in plant science by joining Tribhuvan University, Kathmandu, Nepal, in 1995, and graduated in plant taxonomy in 1997. In 2001, he graduated from ITC in the field of natural resource management (rural land ecology), and is now studying for his PhD degree at the same Institute.

Joshi collecting data during a field visit

Chromolaena odorata growing in Shorea forest

Joshi (left) and Professor van Andel (right) in the field

Iris van Duren (right), Claudia Pittiglio from Italy (centre) and Jan de Leeuw (right) on 10 April 2003

announcements

ITC Lustrum Conference 14-16 December 2005

Spatial Information for Civil Society

Capacity building for the international geo-information society

This year ITC is celebrating its 55th anniversary. To mark this occasion we are organising a conference at ITC Enschede entitled "Spatial Information for Civil Society - Capacity building for the international geo-information society".

Geo-information science and earth observation can play an essential role in finding solutions to problems related to the multifunctional use of space in the areas of water management, food security and the environment, and disaster management, as well as in understanding global change.

The aim of this conference is to analyse and explain the role of geo-information science and earth observation within the context of issues dominating major international agendas such as the Millennium Goals, Good Governance and the Information Society.

We are pleased to announce that Prof.Dr J.A. (Hans) van Ginkel, Rector of the United Nations Universities, will be delivering a keynote address.

If you would like to receive an invitation to this conference, to one of the other events on the ITC agenda or any further information, please contact Ms. Marja Verburg (verburg@itc.nl).

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Lustrum events on the ITC agenda for this year are:

- 12–14 September
  ISPRS workshop "Laser Scanning 2005"
- 15 September
  Inaugural address
  Dr Ir M.G. (George) Vosselman,
  Professor of Geo-information Extraction with Sensor Systems
- 29 September
  Opening Academic Year 2005-2006
  Schermerhorn Lecture by Dr C. (Clarissa) Augustinus,
  Chief, Land and Tenure Section, Global Division,
  UN-HABITAT Nairobi, Kenya
- 2 November
  Inaugural addresses and symposium
  Dr Ir M.G. (Rien) Bos,
  Professor of Irrigation Water Management
  Dr Ir E.M.A. (Eric) Smaling,
  Professor of Sustainable Agriculture
- 3 November
  Inaugural addresses and symposium
  Dr F.D. (Freek) van der Meer,
  Professor of Earth Subsurface Systems Analysis
  Dr Z. (Bob) Su,
  Professor of Spatial Hydrology and Water Resources Management
- 14–16 December
  ITC Lustrum Conference
  Spacial Information for Civil Society

Compete for the Best Paper Award for ITC Alumni!

Jeroen Verplanke alumni@itc.nl

ITC alumni who submit papers for the ISPRS 2006 mid-term symposium "Remote sensing: from pixels to processes", which will be held at ITC from 8 to 11 May 2006, will be in the race for a "best paper award".

The award, which consists of travel costs to the Netherlands and accommodation in Enschede, will enable the winner to present his or her work at the symposium in person. This year ITC celebrates its 55th anniversary and the Institute wishes to focus particular attention on the role that its 17,000 alumni have played in the world of geo-information over the past 55 years - hence the award.

The ISPRS mid-term symposium for Technical Commission 7, "Thematic processing, modelling and analysis of remotely sensed data", will bring together researchers, professionals, managers and decision makers to discuss the issues and latest trends and developments in remote sensing methodology. Each of the eight working groups of the Commission will be organising special sessions, with keynote speakers and speakers from around the world who will come to ITC at that time. There will be workshops, tutorials, PhD master classes for young researchers, and other scientific, technical and social events.

Papers are solicited on all topics related to the symposium theme but especially on the following aspects:

- fundamental physics and modelling
- information extraction from SAR data
- information extraction from hyperspectral data
- advanced classification techniques
- processing of multi-temporal data and change detection
- remote sensing data fusion
- innovative problem-solving methodologies for less developed countries
- derivation of global data, environmental change, and sustainable indicators.

If you are planning to contribute a paper to this event, please let us know (alumni@itc.nl), and send your paper by e-mail to isprsc7@itc.nl or by regular mail to:
ITC - Mid-term Symposium ISPRS
Mrs Saskia Tempelman
P.O. Box 6
7500 AA Enschede
The Netherlands

For more information and guidelines on paper submission, please check the symposium website: http://www.itc.nl/isprsc7/symposium2006/.

partnership news

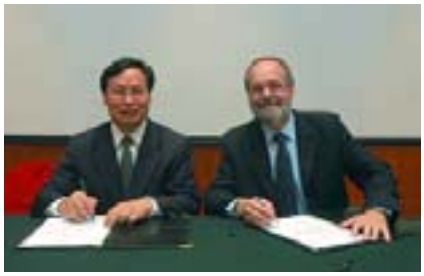
Two Contracts Signed in China

Marjan Kreijns kreijns@itc.nl

State Bureau of Surveying and Mapping
ITC's partner of longest standing in China is the State Bureau of Surveying and Mapping (SBSM). More than 25 years of cooperation in education and training, research, and advisory services have resulted in a close friendship and have led to numerous visits - both of senior SBSM officials to ITC and of members of the ITC Directorate to SBSM.

Each year SBSM staff members follow degree programmes and short courses at ITC, and over the last few years the Institute has also organised study tours for their superiors (e.g. the directors of provincial mapping bureaus).

On 29 June 2005, Dr Xie Jingrong, deputy director-general of SBSM, and Sjaak Beerens, director external affairs of ITC, signed the contract for the



Dr Xie Jingrong (deputy director-general SBSM) and Sjaak Beerens signing the contract

study tour "Surveying and mapping practices in the Netherlands", which will be organised in July 2005 for 23 senior SBSM officials. Dr Xie Jingrong will himself head the delegation during this visit.

Heilong Jiang Bureau of Surveying and Mapping
One of the SBSM provincial bureaus, the Heilong Jiang Bureau of Surveying and Mapping (HLJBSM), signed a separate Memorandum of Understanding with ITC on 20 February 2001. HLJBSM staff have been coming to ITC to train at MSc level for many years now, and in 2004 the Bureau has sent a group of 26 participants for the two-month special course Advanced Training in Geoinformatics. The same course will be organised again in September-October 2005, and during his visit to China Sjaak Beerens signed the contract for this special advanced training course.

Ms Tang Yanli (ITC alumna) from HLJBSM receiving the signed contract from Sjaak Beerens

Gisnaturem: Signing the Agreement

Louise van Leeuwen vanleeuwen@itc.nl

It was about six years ago that I first set foot in Ghana and I was immediately impressed by this nice and friendly country. I was on a short assignment for a regional project and had no idea that Ghana would become my "second home country".

A little later, the first steps were taken towards what has now become a joint MSc programme: I supervised three ITC students on fieldwork in Ghana within the framework of the Tropenbos project. On the advice of Tropenbos, a young man, Joseph, a student from KNUST, was added to the group as a guide and field assistant. He insisted that I should meet his professor, and together we discussed his MSc topic based on the collected field data - the first ITC-KNUST joint activity.

A lot has happened since then. Joseph has graduated and become an assistant lecturer, and the ITC–KNUST cooperation has developed into the joint MSc programme Geo-information Science for Natural Resources Management (Gisnaturem), with its two specialisations Forestry for Sustainable Development (FSD) and Environmental Systems Analysis and Management (ESAM).

Compared with the other newly developed joint programmes, KNUST is somewhat exceptional, in the sense that not only is the course new but also the relationship between the two institutes. For this reason, it took a little longer to develop and prepare the course. KNUST and ITC first had to get to know each other. Still, KNUST is one of the best technological universities in Western Africa, with a large international network and highly qualified staff.

After several visits and many discussions, it was decided to involve two departments in the joint programme:

the Institute of Renewable Natural Resources (IRNR) and the Department of Geodetic Engineering (DGE). The latter already has a number of more technically oriented ITC alumni among its teaching staff, while IRNR has highly qualified staff in the application field of natural resource management. A training-of-trainers programme was developed, and gradually more KNUST staff became acquainted with ITC, and ITC with them. In the meantime, a curriculum was developed, a course structure was devised, and all the other practicalities were taken care of. During the course development phase, the university has gone through a reorganisation, and IRNR and DGE have become departments in two colleges: the College of Agriculture and Natural Resources and the College of Engineering, each headed by a provost. However, this reorganisation has no serious implications for the course.

On 24 January 2005 the big day arrived: the agreement between ITC and KNUST was signed.
Sjaak Beerens and I travelled to Ghana for this ceremony. We were greeted in Kumasi by the two provosts, Professor S.A. Osei and

Professor F. Momade, and were escorted to the office of the vice-chancellor. In the afternoon, the agreement was signed by KNUST Vice-Chancellor Professor Kwesi Andam and ITC Director External Affairs Sjaak Beerens in the presence of some 20 high ranking staff members of the university, including the registrar, Mrs Quashi–Sam. To mark the occasion, Sjaak Beerens presented Professor Andam with Arthur Japin's book *The Two Hearts of Kwasi Boachi*, which discusses the long-standing relationship between the Netherlands and Ghana. The event received ample press coverage.

In the evening, a dinner was organised at the guesthouse of the College of Engineering. Apart from university staff, a number of alumni living in Kumasi and its vicinity were also invited. The party was very animated and many alumni, products of KNUST, renewed and strengthened their contacts with the university.

Now the agreement has been signed - a reason for joy - but the real work has yet to begin. The first students have already registered, the course materials are being prepared, and we are all looking forward to the next big event: the actual opening of the course on 26 September. Again there will be a ceremony and a party, but this time it will not be a celebration of work done but rather encouragement for the work ahead. Nevertheless, KNUST and ITC staff are looking forward to this challenge and we are all dedicated to making this a successful course.

Professor Kwesi Andam and Sjaak Beerens signing the agreement to implement the Gisnaturem course

Professor Kwesi Andam, Sjaak Beerens, and KNUST and ITC staff after the signing of the agreement

Workshop Joint Educational Programmes – December 2005

Tom Loran loran@itc.nl

This year ITC is celebrating its 55th anniversary and to mark this happy occasion a number of events and festivities will be organised. One such event is the Second International Workshop on Joint Educational Programmes.

A first workshop on the subject of joint educational programmes was organised two years ago in December 2003, coinciding with the ITC Dies Natalis. At that time a large number of partner organisations were invited to exchange ideas and discuss the subject of developing an international network for education and training in geo-information and related subjects. At the end of the workshop, the network was officially established under the name GI-NET.

As a result of this workshop, several new initiatives have been developed on joint education. Some programmes have already started (for example, the GFM-4 Diploma course that has just completed its first run at the University College of Lands and Architectural Studies (UCLAS) in Dar es Salaam, Tanzania). Other programmes are in an advanced stage of preparation and will be launched in the near future.

With the steady rise in the number of operational joint educational programmes, partner institutes and ITC have both gained considerable experience in the whole process of designing, preparing, organising and running these programmes. Dealing with

The participants of the First International Workshop on Joint Educational Programmes: time to get to know one another better during the social tour

all the issues related to joint programmes is a challenging and rewarding task, but it can sometimes be difficult and complicated too.

The process of setting up joint educational programmes is now being evaluated internally at ITC. ITC staff involved in the various programmes are being consulted regarding their experiences: problems encountered, solutions found, and best practices used. As the list of difficulties that people have been coping with over the past year or two is already quite impressive, we feel the time has come to organise a second workshop. Staff from partner institutes and ITC alike will benefit from the opportunity to exchange ideas about the practical problems faced together when implementing the programmes that are now up and running.

This second international workshop will be organised in the week before ITC's Dies Natalis. The workshop dates have been tentatively fixed for 12 and 13 December 2005, and the programme is now being developed by the Lustrum Committee.

More information will follow soon!

Second Group of Urban Planning Graduates in Wuhan

Richard Sliuzas sliuzas@itc.nl

On 28 June, 10 participants of ITC's joint MSc degree course with the School of Urban Design (formerly School of Urban Studies), Wuhan University, rounded off their studies during a double degree ceremony. The 10 graduates received two MSc degrees: one from ITC and one from Wuhan University. The ITC MSc degrees were awarded by ITC Director of External Affairs Drs Sjaak Beerens, and the Wuhan MSc degrees by Vice-President of Wuhan University Professor Yu Zhan Ming, in a short ceremony in which ITC was also represented by Dr Richard Sliuzas, Drs Paul Schoonackers and Drs Marjan Kreijns.

The second group of urban planning graduates in Wuhan

This course followed the same basic model as the first and the students spent about six months at ITC writing the first of two MSc theses. The subjects dealt with in their research covered a wide range of topics related to urban development and planning, including the relationship between infrastructure and urban development, the location of social services, the use of GIS for urban heritage planning, the siting of large retail stores, urban growth and the effectiveness of urban planning, the siting of cemeteries, and urban models. Two of the graduates, Peng Chong and Zhang

Dian, were awarded a distinction for their performance throughout the course.

It was especially pleasing to note that all graduates have already made arrangements for the next step in their careers. At least four will be starting a PhD study, but the majority will take up a professional appointment in a public organisation in one of China's cities. ITC certainly wishes them every success in their new positions and we look forward to hearing more of their exploits over the coming years.

The next opportunity to join this course is in September 2005. Details of the contents, as well as information on costs and application procedures, can be obtained from Dr Zhan Qingming (qmzhan@126.com) at the School of Urban Design, Wuhan (yhxiaoitc@126.com), or from Dr Richard Sliuzas at ITC (sliuzas@itc.nl).

Furthermore, as of September 2006 there will also be opportunities to apply for a NFP fellowship to participate in this joint degree course.

Graduates .....

.....say cheese!

visiting itc

Visit of North Korean Delegation

Paul van der Molen

vandermolen@itc.nl

Within the framework of the EU Asian Urbs programme, Vice-Minister of Municipal Management Mrs Ri Kang Hui from the Democratic People's Republic of Korea, together with some high officials, visited ITC on Thursday, 17 March.

The vice-minister was informed on general ITC issues by Professor Paul van der Molen, on the use of GIS in the field of drinking water by Frans van den Bosch, and on urban management by Johan de Meijere. The Asian Urbs programme aims at strengthening the management of urban areas in Asia. The vice minister showed interest in further cooperation, especially with regard to waste-water treatment and drinking-water supply for the city of Pyongyang.

staff news

In Memoriam: Dirk Schermerhorn, Chairman ITC Fund

Klaas Jan Beek beek@itc.nl

On 23 June 2005, Ir Dirk Schermerhorn passed away after a short illness. Since 1984, Dirk had been the chairman of the ITC Fund, known for the financing of fellowships for international events and for prestigious awards, in particular the Otto von Gruber Award, presented during ISPRS conferences.

The ITC Fund was established by the father of Dirk Schermerhorn, Professor Willem Schermerhorn, founder and first rector of ITC. In 1970, Schermerhorn senior expressed his wish that in future years one of his children should be a member of the Board of the ITC Fund. First came his elder son Bob, who was chairman till 1984, when he suddenly passed away and was then succeeded by Dirk.

Under the able chairmanship of Dirk Schermerhorn, the ITC Fund succeeded in increasing its resources and activities. In 2004, the ITC Fund was linked with the ISPRS Trust Fund, established during the ISPRS conference in Istanbul.

Dirk Schermerhorn who, like his father and his elder brother Bob, studied at Delft Technical University, combined his chairmanship with a very demanding position at director level in the Netherlands Telecommunication Company (PTT, later KPN). His able and relaxed way of conducting the Board meetings led to clear and effective decision making in a pleasant atmosphere. Those who had the privilege to meet him personally will remember his friendly, modest character and his high ethical standards. ITC is very grateful for his personal concern with the mission of ITC during the past 20 years. Our thoughts and wishes of support go to his family, who have lost a beloved husband, father and grandfather.

Welcome and leaving

Welcome to ITC	Ir R. van der Velde	Research Assistant Dragon Project Department Water Resources Management (per 4 April 2005)
	Ms H. Youssef–Murad	Travel coordinator/Project secretary Bureau Marketing and Project Services (per 19 April 2005)
	Ms J.M. Terlouw	Administrative Staff Member Communications Department (per 1 June 2006) / Programme Secretary Erasmus Mundus Bureau Education Affairs (per 13 June 2005)
	Drs E.L. Poppe	Research Assistant Department Geo-Information Processing (per 1 June 2006)
	Ms M. Bönhke	Management Information Officer Bureau Education Affairs (per 15 June 2005)
Staff leaving	E.W. Holland, MSc	Senior Project Officer Bureau Marketing and Project Services (per 1 May 2005)
	Ms Y. Sun, MSc	Assistant Professor Department Geo-Information Processing (per 1 May 2005)
	Drs H.M.A. van der Werff	Research Assistant Department Earth Systems Analysis (per 1 May 2005)
	Dr J. Roy	Assistant Professor Department Earth Systems Analysis (per 1 June 2005)
	Dr M. Sharif	Assistant Professor Department Earth Observation Science (per 1 June 2005)
	Ir J.G. Ferwerda	Research Assistant Department Natural Resources (per 1 June 2005)
	J. Schipper	Project Controller Bureau Marketing and Project Services (per 8 June 2005)

Farewell Reception Marjan Kreijns as ITC Resident Representative China

Sjaak Beerens beerens@itc.nl

On Wednesday, 29 June 2005, the ITC Directorate hosted a reception at the Kempinski Hotel in Beijing to bid farewell to the outgoing ITC resident representative to China, Ms Marjan Kreijns. She is leaving China after a tenure of five years. Marjan Kreijns has contributed tremendously to enhancing the collaboration between ITC and professional and scientific organisations in China, and has supported many individual employees of these organisations in finding their way to ITC for study purposes.

Over 60 representatives from client and partner organisations of ITC, from as far afield as Xi'an, Wuhan, Harbin and Shanghai, attended the reception to express their appreciation to Marjan Kreijns in both words and typical Chinese gifts.

During the reception an official agreement was signed between ITC, represented by Director External Affairs Sjaak Beerens, the Netherlands Alumni Network of China (NANC), represented by its chairperson Mr Cui Yan, and the ITC Alumni Association of China (IAAC), represented by Dr Liu Xuehua, installing the IAAC as a chapter of the NANC.

Although Marjan Kreijns is leaving China, this does not mean she is leaving ITC. On the contrary! She will be moving to Thailand, where she will set up an ITC Representative Office for Thailand and neighbouring countries. In his address, Sjaak Beerens expressed the confidence of the ITC Directorate that she would accomplish results similar to her achievements in China.

And the new ITC resident representative in China? This position will be filled by ITC alumnus Mr Chang Zheng, who faces the challenging task of enhancing the position of ITC in China still further.

Ms Marjan Krijns and the new ITC resident representative in China, Mr Chang Zheng

The ITC Directorate hosted a reception to bid farewell to the outgoing ITC resident representative to China, Ms Marjan Kreijns

Ms Marjan Kreijns will be moving to Thailand, where she will set up an ITC Representative Office for Thailand and neighbouring countries

life after itc

ITC Alumni Association of China (IAAC) Established

Chang Zheng

association-china@alumni.itc.nl

When China started to open up to the rest of the world, ITC was one of the first institutes to enter the country - right back in 1978. And to date, ITC has trained no less than 650 Chinese students.
Since their studies at ITC, the Chinese alumni have all been very active in their fields, and stand out as an important group in China, especially in the fields of land resources, and mapping and survey. Many alumni have attained senior positions, such as Dr Liu Yanhua, the vice-minister of the Ministry of Science and Technology of the People's Republic of China. He is recognised as the most highly ranked official who has studied in the Netherlands.

In last few years, other Dutch institutions have started to cooperate with China in the academic field. Although their activities are geared mainly to attracting Chinese students to study in the Netherlands, until recently it was unclear what had happened to those students after their graduation and return to China.

The Netherlands Alumni Network in China (NANC, www.nanc.org.cn) was established at the end of 2004 as the first network of alumni of Dutch higher education and research institutions who live in China. The NANC was set up by a group of active and enthusiastic alumni with the support of the Netherlands Education Support Office (NESO) in Beijing (www.nesobeijing.com), which will also function as the NANC secretariat.

ITC group attracts a great deal of attention

The NANC aims to serve as a platform to provide the means and opportunity for its members and partners to enhance their communication and empowerment and to promote their social and professional interests, thereby ultimately improving Sino-Dutch relations.

The NANC has quickly attracted many Chinese alumni, and 27 Dutch institutions have already signed partnership agreements with the network.

The Netherlands Minister of Education, Culture and Sciences, Ms Maria van der Hoeven, is a keen supporter, and during her latest visit to China, on 30 May 2005, she specifically asked to meet NANC members and other alumni of Dutch universities and higher education institutions. She wished to speak to them in person and hear about their experiences as students in the Netherlands.

Since the very beginning, ITC has been a strong supporter of the NANC and has kept in regular contact. On 29 June, during the visit of ITC Director External Affairs Sjaak Beerens, a formal Memorandum of Understanding Agreement was signed, announcing the establishment of the ITC Alumni Association of China (IAAC) as a chapter - in fact the first chapter - of the Netherlands Alumni Network in China (NANC).

Reception at the Royal Netherlands Embassy in Beijing to launch the NANC (NANC chairman Mr Cui Yan, and the NANC organising committee)

Minister van der Hoeven giving a speech to alumni and students at the Royal Netherlands Embassy in Beijing

The NANC will offer several services, such as the coordination of special alumni chapter events to be held in China and a technical platform

through its website. The IAAC will have a separate board of five to seven alumni: Dr Liu Xuehua has been selected as the first chairperson and Mr Chang Zheng as the first general secretary (he will also remain a member of the NANC board). The IAAC is already in contact with many alumni but we would be delighted to hear from others who may have lost contact along the way.

In the future, all the parties involved (ITC, IAAC and NANC) will discuss a joint plan describing the IAAC objectives and regulations, in accordance with ITC guidelines for establishing an alumni association.

ITC Alumni Association of China (IAAC)
Mr. Chang Zheng
Secretary General
Mobile: +86-13701390177
E-mail: association-china@alumni.itc.nl

The ITC Alumni Association of China (IAAC) becomes a fact: Dr Liu Xuehua (IAAC chairperson), Cui Yan (NANC chairman) and Sjaak Beerens (ITC) signing on the dotted line

Starting Your Own Alumni Association

Jeroen Verplanke alumni@itc.nl

Over the past nine months, several new ITC alumni associations have emerged dotted across the world. From what we have learned from our alumni, we know that most of you would like to have an association in your own country. However, even in some countries where ITC has more than 300 alumni an association has never materialised.
It is difficult for a single individual to launch an association. Considerable time must be spent on organisation - precious time which many of you simply do not have because of other professional obligations. Questions about the requirements and regulations involved also seem to make people a little hesitant to take the plunge.

But never fear, the alumni office at ITC is there to help you. In several cases, we have brought alumni with similar ideas and interests in contact with one another so they could join hands in starting an association. The alumni office can also clear up a lot of matters that may be troubling you. A common misperception, for instance, is that ITC imposes strict requirements on an association that is to bear its name. Not true! ITC has a few general guidelines regarding what it sees as the mission of an ITC alumni association. Beyond that, we try to be as flexible as possible, enabling you to work advantageously within your own environment. Each association is unique, in terms of both set-up and organisation.

The most important lesson when starting an association yourself is not to do it alone. In June a small group of enthusiastic Tanzanian alumni met up with the alumni coordinator in Dar es Salaam to discuss ways of activating the ITC alumni association of Tanzania - it currently exists in name only. Over the years, several individual efforts to launch an association have proved fruitless. This time round, the founders were a group of four. Nevertheless, they were advised to seek out additional alumni committed to getting this association up and running. If you have a committee of some six to eight people, it becomes a whole lot easier to share the tasks and responsibilities. Alumni who have held a position in the SAB will know what I'm talking about. Many hands

Map of alumni associations

make light work! The Tanzanian alumni also considered their own mission for the association. What would be beneficial for them specifically? Their mission will be to strengthen the scientific network of geo-information professionals in Tanzania. Such a mission will enable them to create a professional network that will promote their national geo-information capacity.

If you feel challenged by this Tanzanian idea and would like to start your own country association, please contact the alumni coordinator at ITC (alumni@itc.nl).

Tanzanians who would like to join their "national team" need waste no time: the e-mail address is association-tanzania@alumni.itc.nl.

Refresher Course Bolivia

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From 6 to 17 June 2005, the refresher course entitled "Decentralised Spatial Planning *(ordenamiento Territorial)*: Current situation, new trends and perspectives in Latin America" was organised by CLAS and ITC in Cochabamba, Bolivia.

The topic *Ordenamiento Territoral* has been receiving a lot of attention over the last decade in Latin American and Caribbean counties, particularly within the context of decentralisation processes. Many local governments have prepared, or are in the process of preparing, *Ordenamiento Territoral* plans (i.e. a combination of land use plans and physical plans), thereby generating an impressive quantity of data and maps. However, the implementation of such plans often proves disappointing.

As many ITC alumni and their organisations are involved in the elaboration of such plans, it was felt the opportune moment to organise a refresher course on the theme *Ordenamiento Territoral*l for ITC alumni. A large number of interested alumni applied for this refresher course and, after a competitive selection process, a group of 22 alumni from Bolivia and elsewhere were invited to participate. Some came from ITC's partner organisations (e.g. IGAC, Colombia; UNAM, Mexico; CLAS, Bolivia).

The course programme basically consisted of two parts. The first part focused on various experiences in *Ordenamiento Territoral*, calling on the wide experience of the participants themselves. Success and failure factors were analysed and points for future attention identified. The second part consisted of interactive lectures and exercises on the topics of stakeholder involvement; new approaches in land evaluation; new geo-information tools supporting *Ordenamiento Territoral* ; and spatial multicriteria analysis (ILWIS-SMCE).

The refresher course would not have been so successful without the excellent support provided by CLAS and the ITC alumni coordinator in Bolivia, Ronald Vargas.

The course contributed to creating a network of professionals in *Ordenamiento Territoral* in Latin America

A study trip to the municipality of Punata, for which CLAS had recently prepared a Plan de *Ordenamiento Territoral* , also featured on the programme.

The refresher course turned out to be very successful in terms of bringing professionals together to focus on a highly relevant topic. New insights were gained; but perhaps of even greater importance, the course contributed to creating a network of professionals in *Ordenamiento Territoral* in Latin America. A web community has been set up - initiated and managed by one of the course participants - where ideas for research, interesting sites, training opportunities, conferences and other future network activities can be posted. Participants expressed their intention of continuing to organise ITC refresher courses in the Latin American region, as a follow-up to the course concerned and to support the network of professionals in *Ordenamiento Territoral* in Latin America.

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All in all, the refresher course turned out to be a rewarding experience for participants and staff alike. For more information on the refresher course, please contact one of the staff involved - and below two participants give you their own impressions of the course.

In our hearts forever

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Perhaps you are expecting us to write about the technical experience of the refresher course on *Ordenamiento Territoral* (decentralised spatial planning) organised last June in Cochabamba by ITC and CLAS (Centro de Levantamientos Aeroespaciales y Aplicaciones SIG para el desarrollo sostenible de los Recursos Naturales) of Bolivia. It was indeed a rewarding academic experience, and we learned a lot from our teachers and about the dynamic and interesting city called Cochabamba. But there are some other things that do not go to your brain but to your soul, and that is what we want to talk about.
We, the "foreigners" in Cochabamba, very much appreciated the opportunity that NUFFIC, via ITC, gave us to see old friends, to meet new people, and to share our work and personal experiences after our life in the Netherlands.

You might be thinking that the course was carried out during a difficult political phase in Bolivia. For those of you who haven't read the news, these two weeks were a critical period for that nation: the president was deposed, and a new president is now ruling the country. But, in fact, it was a special time, and those days showed us the power of a courageous people in love with their land.

We travelled a lot. We visited the amazing Chapare region - one of God's great designs - with its plentiful native forest, exuberant nature, and those interesting inhabitants the *guacharos*, the blind birds that live in dark caves and go out only at night. These caves are also the habitat of many species of bats, including the wonderful vampire. Punata came as a complete contrast: a land of deserted areas surrounded by mud-houses and cacti, where precious salt is extracted from large holes in the ground. As you see, Bolivia is a diverse and wonderful country.

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Bolivia boasts the only mine in the world where "Bolivianita" is extracted, an extraordinary semi-precious stone. Its real name is "ametrine", and the purple of amethyst and yellow of citrine mix to give the beautiful gem its special tonality. Legend has it that Don Felipe de Goitia, a Spanish conqueror, was dazzled by the beauty of Princess Anahí of the Ayoreo tribe. Since the princess had decided to accompany Don Felipe on his return to the Old World, the tribe members conspired to confront the conqueror and take his life. The princess warned her beloved about the plans of her tribe and gave Don Felipe the charm she always wore around her neck. After that, Anahí disappeared mysteriously and the conqueror escaped from the fiery natives without hearing anything further about his beloved princess. Since then, the bi-coloured gem represents the divided hearts of the two lovers.

From: Carmen Lucia Verguerio Midaglia
Sent: 15 July 2005 14:01
To: Angela Galeano; Agustin Arellano Reyes; Paul Arellano; Jimmy Ernesto Avendano Castillo; Ivan Bacic; Emile Dopheide; Liza Groenendijk; Maria Jimena Cordova Ramirez; Miriam del Rosario Labrada; Ivonne Astrid Moreno Horta; Cristina Karen Ovando; Santiago Patino; Ruby Pelaez Lescano; Ramiro Reyes; David Rossiter; Jorge Salazar Perez; Carlos Troche; Ronald Job Vargas Rojas
Subject: last minute comment - articulo ITC News

Hello people!

It´s fine that the article on Bolivia will be read; hope you manage to publish it. Very well done!
Only one remark: we didn´t travel so much. Although the landscape was quite different, we were almost always very near Cochabamba, considering how big Bolivia is. And one of the days was fieldwork day, so connected with our study, and the other was weekend! More, instead of just saying that Jorge was a driver, I would say that he was a very good fellow who helped the students to change money, buy necessities, and so on - continuous guiding support at Cochabamba.
I miss something about Picasso, which was much more important to us than "las Bolivianitas"! Sorry Angela and Santiago, but anyway it's good for cultural information. At Picasso we could relax and talk about the situation.
But in summary we can say that despite the political situation in Bolivia, we could enjoy and now even miss the time we spent there!
Maybe one of our photos could be published as well. Liza has a lot of them, so perhaps she could be contacted at ITC.

Congratulations and all the best to you,
Carmen Lucia

Not only is the beauty of this land present in its geography and natural resources, the Bolivians are splendid people. Ronald Vargas from CLAS was more than simply our guide; his constant kindness and continuous support, made the 15 days in Cochabamba an extension to our love of Enschede.
Julio (a great singer), Jimena (thanks for the CDs), Jorge (our driver in Cochabamba), Carlos, Karen (Punata's mayor), Guy (the animal man) and other Bolivian classmates were not only excellent professionals who showed us the decentralised spatial plans in Bolivia, but were also exceptional hosts.

Emile, Liza and David were our teachers, and also our travelling mates, our party pals … what else can we say? It was marvellous!

Our time in Bolivia will be unforgettable. Friends are always with you, even when they live far away. Distance is just a geographical dimension … friendship is forever. We are waiting to see each other again!

We, the "foreigners", people from Brazil (Carmen and Ivan), Mexico (Agustín), Honduras (Jimmy), Peru (Ruby), Cuba (Ramiro and Miriam), Ecuador (Paul) and Colombia (Ivonne, Angela and Santiago) don't have enough words to say "Thanks ITC; thanks Bolivia!".