

ALUMNI MAGAZINE

FACULTY OF GEO-INFORMATION SCIENCE
AND EARTH OBSERVATION
UNIVERSITY OF TWENTE

ITC NEWS

AL SPECIAL 1950 • SPECIAL ISSUE 65 YEARS ITC • 2015 SPECIAL SPECIAL SPECIAL





UNIVERSITY OF PROUD GLOBAL ALUMNI.



IN A GLOBALISING WORLD, WHAT BETTER PLACE TO KICK-START YOUR CAREER THAN A UNIVERSITY WHOSE CORE BUSINESS IS TO CROSS BOUNDARIES? OUR VERY REASON FOR EXISTING IS TO ENGAGE IN GROUND-BREAKING RESEARCH, CHART NEW ACADEMIC TERRITORY AND CONSTRUCT MULTI-DISCIPLINARY ANSWERS TO THE CHALLENGES OF TOMORROW. AS A RESEARCH UNIVERSITY WITH A STRONG FOCUS ON THE DEVELOPMENT OF TECHNOLOGY AND ITS IMPACT ON PEOPLE AND SOCIETY, WE ATTRACT AMBITIOUS, ENTERPRISING STUDENTS FROM AROUND THE WORLD. OUR HANDS-ON ATTITUDE, ALONG WITH OUR UNRIVALLED NETWORK OF INTERNATIONAL BUSINESSES AND INSTITUTES, MAKES US EUROPE'S MOST ENTERPRISING UNIVERSITY. AT OUR PARK-LIKE CAMPUS, WE OFFER A COMPREHENSIVE ARRAY OF ENGLISH COURSES IN THE FIELD OF TECHNOLOGY AND BEHAVIOURAL AND SOCIAL SCIENCES. HEADING OUT INTO THE WORLD? START HERE.

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HIGH TECH HUMAN TOUCH





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cover



65 YEARS **ITC**
UNIVERSITY OF TWENTE

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Rector of ITC (left to right)

Prof.Dr.Ir. W. Schermerhorn	1950-1962
Prof.Ir. A.J. van der Weele	1965-1979
Prof.Dr.Ir. K.J. Beek	1980-1996
Prof.Dr.Ir. K. Harmsen	1997-2000
Prof.Dr.Ir. M. Molenaar	2001 -2009
Prof.dr.ir. A. Veldkamp	2010 - present

INTRODUCTION

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Times change, people change and technology changes, but somehow your memory of ITC does not. For 65 years people have visited this institute in the Netherlands and their visit is never erased from their minds. Of course, ITC has changed and so have the people who come to visit but each of our alumni holds a small piece of the collective memory of "life at ITC", a memory that is cherished by many and probably envied by even more. More than 20,000 individual memories, each holding a small part of the capacity that ITC has built over the past 65 years in the geo-information society!

People always have multiple memories of their time at ITC. There are the memories of going abroad, sometimes for the first time, as well as memories of missing many months with families and loved ones. There are memories of new learning and new skills. There are also memories of a small country with dark winters and beautiful flowers in the spring. Most alumni, however, have their strongest memories of the cultural experience they shared with new friends from all over the world. And after living for months or years in the Netherlands, many memories and friends were left behind and "life after ITC" began. Lives have changed significantly because of spending this time at ITC. New skills have brought people new careers, and exposure to international society and culture has brought new insights and expectations.

The official celebration of this anniversary, the 65th Dies, is to be held on Thursday 17 December 2015, in Enschede. It will be our great pleasure to welcome several alumni and former staff, who will be delivering lectures about their memories. The theme "65 years of ITC" is guaranteed a highly motivated and interested audience, but those of you unable to be physically present will discover more of its content in the next issue (2015-4) of ITC News, the last of 2015.

In this hectic month of December, we would particularly like to thank the contributors for their input into this special issue, and sincerely trust that you the reader will find much enjoyment in exploring this publication specially made in honour of 65 years of ITC.

Virtually yours,
Jorien Terlouw
Editor

Milestones in ITC's 65-year history

Snooping through the ITC archives, we have selected some high lights that chart the history of the Institute since its foundation. Many of these will stir up memories in our alumni, partners and associates - who together form ITC's extensive, and extending, global network - and enable them to identify their own niche in the scheme of things. But as we walk along the milestones marking our path, one thing is clear: the foresight and energy that characterised the early years of the

Institute is still very much with us today. So, yes, we do have a great deal to celebrate as we consider our journey so far, but equally important we can celebrate the fact that thanks to the sound foundations laid and consolidated over the past 65 years we are able to face the future with optimism and confidence. History is still being written by us all!

Foreword ITC Directorate

Anniversaries by their very nature are a cause for celebration. "Happy anniversary!" we say as yet another year comes to a close and a new one opens. All the same, some anniversaries seem just that little more special than others, and in these days of rapid change, innovation and technological advance, ITC's 65th anniversary represents a remarkably robust milestone in its long history. Initiatives come, initiatives go, but the initiative taken to establish a training centre for aerial survey in the Netherlands at the beginning of the 1950s has developed to an amazing degree. Today its network of alumni and activities spans the globe, and continues to grow in depth, diversity and outreach.

Over the past year the University of Twente has developed a new Vision 2020: Navigating with Precision. The aim is to become an international university. New "high tech human touch" knowledge will be developed with international partners for and within an international context, focusing on the global grand challenges.

The way in which the UT embodies and combines these core values is what makes it unique: focused on society, driven by synergy, entrepreneurial and international in nature. ITC, which develops and applies spatial technology (high tech) that generates international societal impact (human touch), fully supports these new core values. ITC considers its alumni to be its most important "product": they are our proud ambassadors and preferred partners in many projects. ITC will continue to consult and access its alumni network to achieve its mission and goals. This special issue of ITC News appears on the shelves to mark a significant occasion. Among its pages you will find a summary of the events that have punctuated ITC's unique journey through time. Some of these you may know already or have experienced personally; some may be new to you or revive buried memories; some may even come as quite a surprise. One thing is sure, however, as a reader of this newsletter you will learn still more about the institute – now faculty – of which you are part.

On behalf of the ITC Directorate

Tom Veldkamp

Rector/Dean Faculty ITC



Tom Veldkamp

1949

- Prof. Dr. Ir. Willem Schermerhorn visits the UN Headquarters in Lake Success to advise on the use of cartography for UN purposes. He is asked whether he envisages establishing a training centre for aerial survey in the Netherlands. By the end of the year his ideas for a training centre have become part of the Dutch Programme for Technical Assistance.

1950

- The Charter of Foundation is duly authorised by the Minister of Education and the Minister of Agriculture, and Professor Schermerhorn is appointed dean of the Institute.

1951

- The first course of instruction starts, using part of the building that houses the Geodesy Department at Delft University.

1952

- Mr. F.J. Doyle of the Photogrammetry Department is the first student to take a full examination after one year of study.

In Honour of ITC's 65th Lustrum

Jack Dangermond

Esri founder and president
Honorary Fellow of ITC

Thank you for inviting me to say a few words in honor of ITC's anniversary. I have many fond memories of ITC. It has always enjoyed the reputation of being "the" place for getting a real education in surveying, mapping, photogrammetry and then later remote sensing, earth science and GIS.

In addition to their excellent training programs, ITC managed to establish a special feeling and culture that has infected all who have attended and been associated. It has resulted in a magnificent network of professionals who are proud to have been there and have affected the world in many ways...

I personally appreciate having being associated with ITC and while I never attending directly, I greatly appreciate all the good efforts done by everyone there.

ITC has really made a difference in the world...



Jack Dangermond



MR JACK DANGERMOND was awarded in 2004 with the honorary title Fellow of ITC in recognition of his accomplishments of exceptional merit, furthering ITC's development, the realisation of ITC's objects, and the development of the scientific fields in which ITC is engaged.

All Honorary Fellows of ITC

In recognition of their outstanding contribution to the aims of the Institute by promoting its scientific aims and by supporting or participating in related institutes in developing countries:

Prof.Dr.Ir. W. Schermerhorn, the Netherlands (1969)
Dr. A. Gonzales Fletcher, Colombia (1976)
Chief R. Oluwole Coker, Nigeria (1976)
Ir. Pranoto Asmoro, Indonesia (1976)
Col. J.N. Sinha, India (1976)
Ir. Soekiman Atmosoedarjo, Indonesia (1976)
Prof.Ir. A.J. van der Weele, the Netherlands (1981)
Dr. F.J. Doyle, USA (1986)
Prof. P. Misra, India (1986)
Prof.Dr. F.J. Ormel, the Netherlands (1986)
Prof.Dr.Ir. J. Rais, Indonesia (1988)
Prof. Ning Jinsheng, China (1988)
Prof.Dr.Ing. F. Ackermann, Germany (1992)
Prof.Dr. Shunji Murai, Japan (1993)
HRH Prince Claus of the Netherlands (1993)
HRH Princess Maha Chakri Sirindhorn of Thailand (1996)
Prof.Dr. J.A. van Ginkel, the Netherlands (2000)
Eng. M.M. Ibrahim, MSc, Egypt (2000)
Dr. D.P. Rao, India (2000)
Prof.Dr.Ir. K.J. Beek, the Netherlands (2002)
Dr. J. Dangermond, USA (2004)
Dr. G. Câmara, Brazil (2008)

1953

- ITC participates in founding the OEEPE (currently Euro SDR), to be based at the Institute. The main aim is to organise joint experimental and development research geared to solving practical problems encountered by member countries in all phases of the mapping process.

1954

- The first long-term project begins, supported by the United Nations. The project team is to act in an advisory capacity, looking at the national cartographic programme of the National Cartographic Centre (NCC) of Iran from the short-term and long-term perspectives, and advising on the installation requirements in NCC's new building and on the purchase of equipment.

1956

- HRH Prince Bernhard of the Netherlands officially opens the new building, which not only houses the Institute's training facilities but also provides student accommodation.

50 years ITC Alumnus!

From ITC Student to ITC Professor.

Professor (Em) Dr John van Genderen

genderen@alumni.itc.nl

On the occasion of ITC's 65th Anniversary, it is my pleasure to write some comments on what has happened to me since coming to ITC as a young Graduate from Australia in 1966. Here are some of the main highlights.

1966-1970

I arrived in a cold Delft in November, 1966, from Tropical North Queensland to commence my study for a one-year Post-Graduate Diploma in Air-photo Interpretation. (No Earth Observation satellites existed yet at that time!). 1966 was the year that ITC changed its status from International Training Centre (ITC) to International Institute for Aerial Survey. Also, at the end of that year, the founder of ITC, Prof. Schermerhorn handed over the rectorship of ITC to Professor van der Weele. After completing my diploma course in 1967, I stayed on to do an MSc as since becoming an Institute, ITC could now award MSc degrees. That was completed in August 1969. After my MSc in Delft, I moved to the University of Sheffield in the United Kingdom, where I became a lecturer in Remote Sensing, for a UNESCO MSc Course for students from Developing countries, and where I completed my Ph.D. in remote sensing, in the year that the first LANDSAT satellite was launched.



Fieldwork in France of the class of 1967:

From left to right: Professor Herman Verstappen, Mrs Karmon (Israel), Mr. Popescu (Rumania), Mr Guttierrez (Colombia), Mr Gatteau (Canada) and Mr John van Genderen (Australia)

1970-1975

Each year I brought the students from Sheffield to ITC for a one month practical course. We also carried out joint fieldwork with the ITC students in the south of Italy for six weeks each year.

1976-1980

During these five years I worked for a remote sensing company in United Kingdom. In 1976 I was invited to give a paper at ITC's Silver Jubilee (it was only in 2000 that ITC "added" a year, to make it exactly 50 for the ISPRS Congress held in Amsterdam in that year). Also, I came back to ITC as a visiting scholar with an IGU Scholarship. Highlight in this five year period was the series of four international Seminars organized by ITC for Senior Decision Makers, in Enschede (1977), Malaysia (1978), Colombia (1979) and Kenya (1980). I was invited as a consultant to participate in these four events.

1980-1985

During these five years I worked for various international remote sensing companies in Europe and USA. Each year I visited ITC several times to keep in touch with staff members.

1986-1990

In 1986 I became Head of ITC's Project and Research Coordination Bureau.

1991-1995

In 1991 I was appointed ITC Professor in Operationalization of Remote Sensing Applications in the Earth Sciences. The highlight of this period was the First International Symposium on Opera-

1957

- Visit of Pandit Jawahar Lal Nehru (first Prime Minister of India).

1959

- First edition of the International Bibliography of Photogrammetry: correspondents from all over the world make abstracts of publications and at ITC these are translated, classified, printed and sent to subscribers.

1960

- First edition of the ITC Publication Series, with (A) articles on photogrammetry and (B) articles on photo interpretation

1961

- Professor Schermerhorn establishes the ITC Foundation Fund, encouraging scientific research in photogrammetry in general and at ITC in particular. In this context, every four years at an ISPRS congress the Foundation presents an award. This is called the "Otto von Gruber Award" in honour of services rendered to photogrammetry by Otto von Gruber.

tionalization of Remote Sensing , held in Enschede in 1993, and attended by over 1000 participants from more than 85 countries.

1996-2000

During this period I became head of the ITC division of Applied Geomorphological Surveys, responsible for the courses on Coastal Zones and Natural Disaster Mitigation. This division had 25 staff.

2001-2005

With the arrival of the last Rector of ITC in 2000, the Institute was reorganized from 15 divisions into six larger departments, and I was transferred to the EOS Department. In 2004 I became the President of the ISPRS Remote Sensing Commission.

2006-2010

After completing my term for ISPRS in 2008, I took compulsory retirement from ITC in July 2009. Fortunately ITC has an Emeritus Room for retired Professors, which I could use as a base whenever in Enschede, to write papers and meet with staff and students.

2011-2015

These five years were most enjoyable, being free to travel the world and meet ITC alumni in more than 140 countries. Attending many conferences in Developing Countries it was always a great pleasure and honour to meet former classmates and other ITC Alumni.



Mongolian ITC- Alumni Meeting, 2005

Having worked in all three buildings of ITC, from the original building in Delft, that has now been demolished, to the "Twin Towers" on the Boulevard 1945, of which only one tower now remains, to our ultra-modern building on the Hengeloostestraat, opened by H.R.H. the Crown Princess of Thailand, also an ITC Alumna, and having experienced every name change of ITC from the original International Training Centre to Faculty ITC of the University of Twente, as well as having worked with every Rector of ITC since the Founder, I am confident that at 65, ITC is nowhere near finished its task of training and educating young persons in the latest technology and applications of geoinformation. What a change from the day I arrived: at that time, no computers, tablets, internet, mobile phones, GPS, etc. Also, the students were greatly different at that time, being mainly mid 30 year old , male, mid-career professionals , to now being young graduates doing research for MSc and PhD!

Happy 65th Anniversary, ITC!

John van Genderen.



Chinese-ITC Alumni meeting in Beijing. (With, amongst others, Marjan Kreijns, Chang Zheng, LI Peng De (Dept. Director General of SBSM), etc.)



Prof. Dr. Amarsaikhan, the first Mongolian student to come and study at ITC. Now an Academician in the Mongolian Academy of Sciences, and Professor of Remote Sensing at the National University of Mongolia, (NUM) which houses the NUM-ITC-UNESCO Laboratory of image processing and GIS.

1964

- Following approval of the Dutch proposal by the UNESCO General Assembly, the International Museum of Soil Standards is established within ITC.
- The first Otto von Gruber Award is presented to Dr. Ir. F.E. Ackermann.

1965

- ITC-UNESCO Centre for Integrated Surveys is initiated following agreement between the Dutch government and UNESCO.

1966

- Following an agreement between the Indian and Dutch governments regarding technical assistance, the first course is held at the Indian Photo-interpretation Institute (IPI) in Dehra Dun, India.
- Position of ITC as a private foundation for scientific education in the Dutch education system is officially recognised.

Comes a Time

Hendrik Westerbeek

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In 1953 I was born in a rural area in the north of the Netherlands. The thirties and forties of last century heavily traumatised this area and families, because of tuberculose explosions and war activities in the Netherlands and Indonesia. Also my family and parents. From the fifties on situations changed rapidly, for instance by the invention of antibiotics and improved social and economic structures. Also children from working class people got opportunities for development and were offered study possibilities.

It wasn't common use in my family as a child to go to university. The idea was more focussing on building family and gaining income. So I did. I got a starting job at Netherlands' Kadaster in 1974 as a land surveyor, married in 1976, becoming father in 1977 and 1979 and studied in the evening hours.

About 1996 I worked for Kadaster in Surinam in a project together with professor Willem van den Toorn from ITC. We drank an evening Parbo beer at the Surinam riverside. He invited me to join his team for some activities and I asked him to support me in getting my MSC degree as a kind of compensation.

An academic committee defined that I should at least take a study load of 1200 hours on top of my studyresults so far. The board of Kadaster approved me taking time for study in a kind what now is called sabbatical leave. From 1998 – 2000 I studied at ITC and executed some project activities there besides my job as a strategy advisor at Kadaster (I must have been one of the best paid students ever in ITC's history).

Day to day I travelled between Apeldoorn and Enschede. An exciting time between my international classmates. I shopped in Geomatics and Social Science and in 2000 I succeeded my MSC programme with distinction (socio economic data collection for natural resources management). My father was in the auditorium that day being as proud as he could be. Professor Van den Toorn greatly honoured him with some dedicated words.

The diploma and new gained knowledge fast offered me new career possibilities in Kadaster and in an international context. The thesis results and discussions turned out to be very useful and opened the minds.

Currently life long learning is a must. I might already have shown that returning to university at the age of 45 years is very profitable for yourself and multiplying your value in society.

On a regular base I stayed in contact with ITC. Together we have been involved in international projects. I always will be grateful to staff and friends at ITC for giving me the opportunity of studying there.

Best wishes,
Hendrik Westerbeek.



Hendrik Westerbeek

1967

- First course at the Centro Inter-Americano de Foto-interpretacion (CIAF), Bogota, Colombia
- Six ITC staff members are nominated for professorships and the nominations are approved by the Ministry of Education and Sciences in view of the official position of the Institute in the Dutch education system.

1968

- Introduction of the ITC stereo trainer at the ISP congress in Lausanne.

1969

- Introduction of the ITC stereo trainer at the ISP congress in Lausanne.

1971

- Partial move of the Institute from Delft to Enschede and inauguration of ITC's new premises by HRH Prince Claus of the Netherlands.

1972

- First course at the Regional Center for Training in Aerial Survey (RECTAS), Ile Ife, Nigeria.
- Opening of IPI main building in Dehra Dun.

ITC: 65 Years in Five Buildings

Homme Martinus

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1950-1956 Delft, Kanaalweg, (TU Delft, Geodesy)

The ITC came into existence by passing the charter of foundation on 11th July 1950. By that time there was no building for the new organization. It housed in a part of Geodesy building to the Technical University in Delft. Founder of the ITC – Prof.dr.ir. Willem Schermerhorn – was professor at the TU Delft and lived in the professor apartment at the Geodesy building.

First courses of the ITC started in in 1951 and the – small informal – organisation used office space in the building of the Geodesy Department.

After receiving a loan from the Netherlands Government, preparations could be made for a building specially designed for the training of photogrammetrists and photo-interpreters. This building was erected on the premises of the Delft University at the Kanaalweg. The building designed by architect Postel, was constructed from a steel skeleton onto which front panels were attached, using a new assembling system called 'airey': a very modern building in thosedays!



Kanaalweg Geodesy

1956-1971 Delft, Kanaalweg 4 (Officiële opening november 1956)

On November 1956, His Royal Highness Prince Bernard of the Netherlands officially opened the new building. The new building not only housed the Centre's training facilities but also contained student accommodation. This must be seen in the light of Schermerhorn's social-mindedness. The Centre not only had a scientific responsibility towards its students but also a social one. This social responsibility is related to the students' well-being during their stay at ITC. Schermerhorn lived in his penthouse on the top floor of the new building.



Kanaalweg 4

1973

- First ITC Journal is published, its purpose being to keep ITC alumni informed of the Institute's scientific and educational activities.
- Inauguration of ITC's Guest-house Schermerhorn Hall.

1975

- First courses at the School for Photogrammetric and Cartographic Operators, Bandung, Indonesia, and the opening of its building on the campus of the Institut Teknologi Bandung.
- New aeroplane for ITC, dubbed "Nadar".

1976

- Presentation and worldwide recognition of Actual Space Use Map Enschede, based on urban land use inventory using photo interpretation.
- First International Social Evening: a journey around the world, with traditional dances and musical performances by ITC students.

1977

- Start of the course Application of Remote Sensing Techniques, dealing with new techniques in the use of satellite images.

The Institute became in a period of growth; in numbers of students as well as in numbers of projects being carried out. Inherent the number of staffmembers grew also. [foto staf en studenten 1958]

On 18 December 1967 the anniversary celebrations of the Institute were held outside the ITC building because the steady and continuing growth of the Institute had reached a point where it had outgrown the capacity of its own premises.

In the years to follow the location of the ITC was subject of discussion; not only internally within the Institute but also of governmental level.



1971-1996 Enschede, Boulevard 1945 nr. 350 (Twentec)

In the light of spreading governmental services throughout the country, the Netherlands Council of Ministers decided in March 1971 that the ITC had to move to Enschede. One month later, ITC staff met with Enschede and in August 1971 the Institute moved to its new building.

On 12 December 1971, on the celebration of its 20th anniversary, the new premises for the Institute were opened by HRH Prince Claus. The new building by no means looked and felt like the Delft building. Actually the new building consisted of three building: two large towers connected by a two-floor section. It meant more space for staff and students but also longer distances to meet colleagues. In the two-floor section between the towers, the restaurant was situated. The place to spent the coffee- and tea breaks and to have lunch.

Being located in a building which no longer met modern requirements for an educational institute such as the ITC, plans for a new building were made during the mid-eighties. At first, the plans concentrated on a location opposite of the students' living quarters. Local political parties hesitatingly approved ITC's plans. However, the Netherlands Ministry of Education and Science preferred a location on the campus of Twente University. Studies were made of the possibility of collaboration of the two organisations, resulting in a postponement of the ministerial decision.

In 1990, a new government was formed and the housing discussion was renewed. This time it resulted in a positive decision for a new building near the center of Enschede: the Hengelosestraat.

Following a construction period of 18 months, ITC moved to its new building during the months of June and July 1996.



Boulevard 1945, 350



1979

- Opening of the International Soil Museum in Wageningen.

1980

- Visit of Minister De Koning of Development Cooperation.

1981

- Opening of fully equipped simulator room for aerial navigation training (simulators in use since the 1970s).

1983

- Visit of Minister Schoo of Development Cooperation.
- The micro-light aircraft Quicksilver acquired for use in the Human Settlement Analysis project in India.
- The first software package for manipulating grid-cell maps and images becomes operational. It is intended for students and scientists working in the fields of land evaluation, cartography, urban surveys and image processing, and can be considered the first attempt to develop a geo-information system at ITC.

1996-2015 Enschede, Hengelosestraat 99

On the 24 September, Her Royal Highness Princess Maha Chakri Sirindhorn of Thailand officially opened the building. The building is designed following the principles of organic architecture. This tendency in architecture uses variously shaped angles, warm colours and natural materials. By using a selection of colours in the central hall and stairway, the elements earth, water, air and fire are represented in the building. The central aspect of 'organic' architecture is the human being: people should feel at home in their working environment. Therefore special meeting places can be found within the building; the most remarkable one is the restaurant: a well visited place during coffee-, lunch and tea breaks.



Hengelosestraat 99

1972-2015 Enschede ITC Hotel, Boulevard 1945 nr 2

In the light of the move from the ITC from Delft to Enschede, a solution had to be found for the student housing. In Delft the upper floors of the building were used for

this purpose but the increasing numbers of students urged for a new solution. In Enschede a separate building was erected especially for student housing: the ITC Hotel (in those days ITC Guesthouse Schermerhorn Hall). The guesthouse consist to

two combined blocks of flats (the living towers) of 14 floors. The lower-pitched building on the east side of the living towers contained the reception, offices of the staff, a laundry, children's crèche, bar and the so called 'common room'. Next to this part there was an Auditorium, used for congresses, and a weekly film for students and public. A few years ago the lower-pitched building was demolished. The living towers still meets their originally purpose: housing students.



Boulevard 1945, 2

1984

- International seminar on the earth observation satellite SPOT; use of SPOT opens a new era in remote sensing at ITC.
- Working visit of HRH Prince Claus of the Netherlands.
- Agreement of cooperation signed with the Chinese Academy of Science.

1985

- Start of six-year programme of cooperation and support between ITC and Instituto Geográfico Agustín Codazzi (IGAC, formerly CIAF).

1986

- ISPRS Technical Commission VII Symposium held at ITC, during which SPOT results are announced.

Fast Changing and Developing Arena of International Education

Martien Molenaar

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How could I be short about ITC? I spent 28 years of my professional career at this institute, 10 years from 1973 to 1983 and then 18 more years from 1996 to 2014. After such a long time this institute conquers a place in your heart and you become personally very attached to it.

I have good memories of the many students I had the privilege to work with; especially the PhD candidates with whom I often worked closely with for four or five years. When you work together for so many years you grow beyond the relationship of teacher and student. You become friends, friends you grow very fond of.

The most intensive and challenging period was certainly the time that I could serve ITC as Rector, with Sjaak Beerens as my right hand. That was the time that ITC had to integrate into the Dutch system for higher education and had to preserve its strong position in the fast changing and developing arena of international education. At the same time we had to adjust to the fast changing idea's about international cooperation.

We had to fight for the future of the institute and it soon became clear that integration into the University of Twente was the best strategy in this respect. This was emotionally a tough decision for somebody who grew up with the traditional mission and culture of ITC, a relatively small institute with such a particular own culture and character.

But times do change and the world with that. And I am happy to see, during my regular visits, that ITC is doing so well in this new setting and that it is flourishing as ever before.



Martien Molenaar, Rector ITC 2001-2009

I wish ITC and its community a long and successful future.

1987

- Laying of the foundation stone of the Education Centre for Urban/Regional Surveying, Planning and Management (ECURSPAM), Wuhan, China.

1988

- Introduction of the Integrated Land and Water Information Systems (ILWIS).
- Arrival of the first students to conduct and defend their PhD research under the auspices of a Dutch university

1990

- First ITC PhD graduation: Dr. Joseph O. Akinyede, Nigeria.

1991

- Visit of Minister Pronk of Development Cooperation.

Nasreen Islam Khan, Canada

ITC is always in my memory.

Cheryl Balde, The Netherlands

ITC has become one of the most valuable life experiences i've had, not only because of the study but because i have found 2 very good friends who have stayed on as not just good friends but more like family now... hope Ezra Bozyazi and Shilpam Pandey can read this.

Enrique Castellanos, Cuba

#65yearsitc Brings back good memories, gives you hope for the future!

Abdellah Akki, Morocco

I miss that place!!!

Fitka Bilshakka, Nigeria

I so much enjoy the coffee and all the social activities including networking with friends

Jordi Castellà, Chili

Great memories, cheers to y'all

Moise Vardt, Cameroon

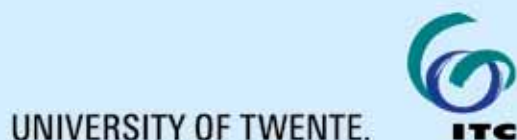
When the clusters became tuffy, and when I can't get on track during the thesis days, coffee time as well as the coffee machine ready to supply was the ultimate Messiah to put things back on track.

Teggy Van Deer, Namibia

I love ITC so much unforgettable memories...

Degelo Sendabo, Ethiopia

I never forget this logo and the place at the center of Enschede.



Origin ITC students

Since its foundation, more than 20,000 students from 175 countries have completed courses at ITC. They are distributed among the continents as follows:

- Europe: 3122
- Asia: 8924
- Africa: 6412
- America: 2107
- Australia & Oceania: 182

1993

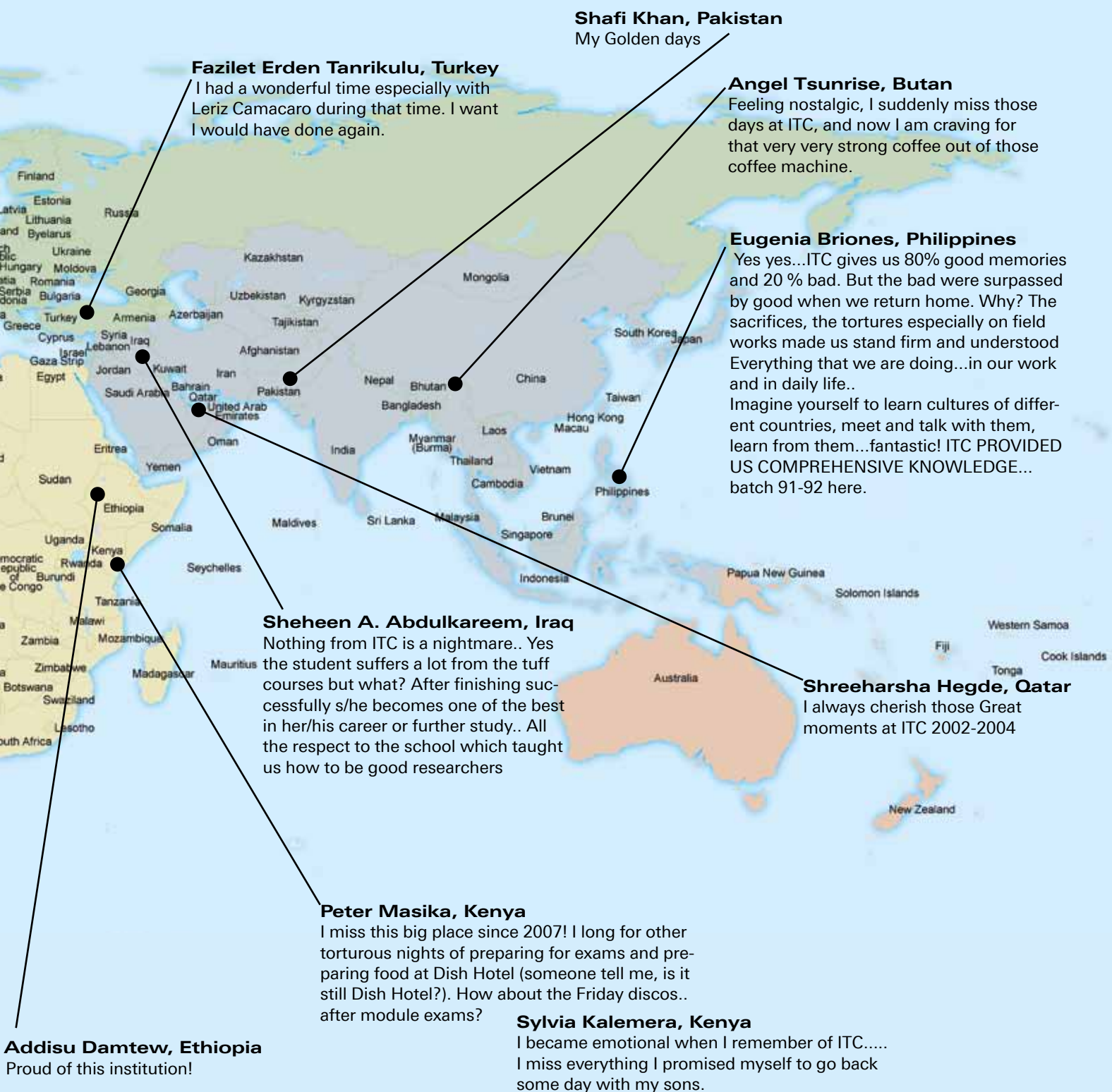
- Prof.Dr. Shunji Murai from Japan officially installed as Honorary Fellow of ITC during the symposium "Operationalization of Remote Sensing" (around 1,000 participants from 68 countries).
- Refresher courses initiated to keep alumni of the Dutch institutes for international education abreast of latest developments in new technologies, methods and techniques.

1994

- Introduction of Institute's new logo.

1995

- SAIL, the umbrella organisation representing the five institutes for international education (IHE, ISS, MSM, IHS and ITC) and Wageningen Agricultural University, becomes a statutory body. The purpose of the cooperation is to find ways of integrating international education with that of the Dutch universities.



1996

- Inauguration of Centre for Aerospace Survey and GIS Applications for Sustainable Natural Resources Development (CLAS) at the University of San Simon, Cochabamba, Bolivia - one of ITC's institutional strengthening projects.
- Opening of new ITC premises in Enschede by HRH Princess Maha Chakri Sirindhorn of Thailand.

1997

- Change in organisation of educational activities: all courses, except the diploma course, to start in September each year and to consist of several interrelated three-week modules, offering the freedom to choose from a variety of elective modules and usually providing opportunities for specialisation
- Congress "Geo-information for Sustainable Land Management", dealing with the role of geographical information, particularly soil information, in supporting sustainable land management (125 keynote addresses and oral and poster presentations; 190 participants from 50 countries)

ITC Remains to be my Second Home

Peter Kariuki Mwangi p.k.mwangi@utwente.nl

Consultant MaMaSe Project

Msc NRM ITC 2010

It was a great moment being in ITC again after five and a half years absence. Some may not know but not only has ITC had an impact to my professional life but it also plays an integral role to my roots, or I would say my place of birth. You should have seen the government official face turn red when typing my name in the computer screen in 2008 when I came to the good old ITC to do my masters. He found it odd registering me as a foreign student and yet I am a 'tukker' (Enschede citizen). Interesting it was, something to chat and laugh about, when I told him how it all happened.

Moving forward swiftly, 37 years after my welcome to this planet I am here again. Meeting a few of my dear friends, former classmates and lecturers of which some turned colleagues due to my engagement with a project in ITC, the Mau Mara Serengetti (MaMaSe) project. It is as exciting as it is challenging and more so it connects my two different worlds in Kenya – with its breath taking wilderness and Holland, which defines human's greatest organized life – even the dogs know how to walk in the streets. It seems ITC remains to be my second home.

My professional life has an equally interesting journey. I might have developed my interest in geo-information technology from the time I was born because at the same time my dad was busy struggling to get it right with his cartographic studies in ITC. A few years after my first degree in biology I worked a lot with my dad in cartography and soon found my passion in using geo-information technology for environmental monitoring/analysis. After five years working in various places I found it necessary to elevate my education and by God's grace I was able to do my Masters in Natural Resource Management in ITC. It was as enjoyable as it was challenging and we would always tell each other to



MaMaSe project field work at the Masai Mara, Kenya 2015

party hard and study hard in order to survive.

My studies in ITC bared good fruits to my professional world and opened doors to a number projects back in Kenya. I worked with environmental conservation organizations like: African Conservation Centre – founded by one of the most respected landscape ecologist, David Western; Earth Watch – which mainly focused on local



ITC front yard with my fellow NRM students in 2008

community environmental monitoring and conservation; IUCN, African Elephant Specialist Group (AfESG) – that has an important mandate of publishing the distribution and population of African Elephants. The job cut out for me in these organizations was mainly on the spatial monitoring and assessment of the environment which matched a lot with what I did in ITC for my masters therefore improving my professional experience.

1998

- In April first meeting of the founding members of the Association of Geographic Information Laboratories for Europe (AGILE) at ITC.
- In May 18th Annual Symposium of EARSEL held at ITC (160 participants).

1999

- Visit of HRH Princess Margriet to mark the joint venture initiated between ITC and PCI.
- ITC News launched, a publication to be sent to all alumni and organisations affiliated with ITC in order to keep them abreast of current events at the Institute
- United Nations Office for Outer Space Affairs and the International Astronautical Federation organise the workshop "Space: An Integral Part of Sustainable Development" at ITC.



NRM student colleagues in 2008



NRM student colleagues in 2009



Msc Project field work at Malaga, Spain 2009



Figuring out stuff in class, ITC 2009

Five years later after my master studies in 2010 the drum beats of ITC started again and this time I was to engaged in a project called MaMaSe. My friend and former lecturer Bert Toxopeus was the man to meet to make it happen. We had a great time in Masai Mara, Kenya, doing field work for the project earlier this year with a couple of risky attempts to get the primary

data – flooded river crossing, wild animals encounters were just part of our daily excitements. The project just came knocking at my door at the time I was finishing with IUCN-AfESG. Now I am back in ITC but based in Kenya.

My first visit to ITC was euphoric, a number of things have changed since the last

time I was here, I trust it is for the better, and the joy of meeting faces that I knew brought a smile to my face. As a dear friend ones told me life is a journey, make the best out of it. I would add a bit more to it and say what goes around definitely comes around.

Happy 65 years ITC!

AARS Congratulates ITC with its' 65 Years

As the General Secretary of the Asian Association on Remote Sensing(AARS), I would like to congratulate ITC for the 65 years anniversary. ITC is very famous in Asia as the high level education center on spatial information science including remote sensing.

There are many famous professors and engineers in Asia who have studied remote sensing at ITC. AARS organizes the Asian Conference on Remote Sensing (ACRS) once a year in Asia. This year we successfully organized the 36th ACRS in October in Manila with more than 900 participants. At that time, we were happy to have Prof. Tom Veldkamp, the ITC Rector, as a plenary speaker of the opening ceremony. As he mentioned in his speech, ITC has been supporting ACRS for years as an associate member of AARS. The relationship between ITC and AARS/ACRS is quite tight. However, after the reformation of ITC, the

attendance from ITC to ACRS has reduced. So, this time, we were happy that Prof. Veldkamp could come to ACRS and discuss with us on our future cooperation. Economy in Asia is growing, but we still have problems in education. Expectation towards ITC is not small. We look forward to our fruitful cooperation in the future.

Kohei Cho

General Secretary Asian Association on Remote Sensing(AARS).



Kohei Cho

2000

- Two textbooks on GIS and remote sensing - the core subjects of ITC course curricula - published and translated into different languages.
- Move of the departments of Mineral Exploration and Exploration Geophysics from Delft to Enschede.
- 19th ISPRS congress in Amsterdam: Professor Klaas Jan Beek congress director; Professor Martien Molenaar chairs programme committee; many ITC staff are involved in the organisation or contrib-

ute to the scientific programme. ITC offers a refresher course for alumni in conjunction with participation in the conference, as well as a reception for ITC alumni at the Royal Tropical Institute.

Studying at ITC – The story of Mr W.C. Verboom

W.C. Verboom

ITC Alumnus

In 1954, I was stationed as a conservation officer in the Southern Province of Northern Rhodesia.

My duties related to regional planning and soil conservation, and my toolkit comprised a set of aerial photographs and a mirror stereoscope. A visiting pilot on his way to the Victoria Falls watched in silence as I fiddled with my photograph. "Ever had any training?" he asked. "No," I replied. "I haven't got a clue how to use these materials properly." He suggested I should apply for a course at ITC Delft.

The Director of Agriculture approved my application but I would not receive any financial contribution towards the fees. On my return, if I could prove that my acquired knowledge was beneficial for my work, I could request a refund of my subsistence fees and tuition expenses. I applied for an ITC course in photo interpretation and received a positive response. Only single accommodation was available at Delft, but my father-in-law kindly offered my wife and two sons hospitality in Amersfoort. In Delft, I found ITC without much trouble but what a shock awaited me. The place was in utter chaos and building work was still in progress. The lectures were held in rooms of Delft Technical University. There was an exercise room with mapping materials, stereoscopes and stereo Sketch Masters, as well as a large

room with big instruments destined for photogrammetrists (a special tribe) but taboo for photo-interpretation students. The accommodation was pleasant and the little shower with hot water was bliss for a man from the tropics. The food in the communal dining room was good and plentiful. No "Apartheid" there!

I gradually came to understand just how much information could be extracted from the aerial photos of my study area, which I had brought with me as training material. Six months later, I sat the examinations and returned to Northern Rhodesia armed with a certificate.



Visit of Pandit Jawahar Lal Nehru (first Prime Minister of India)

Working on a stereosimplex G6

2001

- Administrative relationship with the University of Twente, whereby the university acts as ITC's main representative and intermediary with the Ministry of Education.
- Implementation of decentralised educational programmes: joint educational programmes in Bolivia, China, the Philippines, India, Iran, Mexico, Nigeria and Tanzania.

- Presentation of the first Klaas Jan Beek Award for best ITC MSc thesis to Mr. Walid Belal from the Urban Planning and Land Administration programme for his thesis "The use of bicycles for accessibility of the low-income population to work opportunities in Ismailia, Egypt".
- Introduction of new ITC Research Programme.

Back to Africa

On my return, I was sent to the Central Agricultural Research Station near Lusaka. We had all the instruments needed and aerial photographs of the whole country. A visit by the Director of Agriculture found us busy with a "slotted template", which was considered a form of advanced witchcraft. My acquired knowledge was now considered useful, so my modest accommodation expenses and the tuition fees were refunded.

A new development plan to resettle miners as farmers was initiated in the Northern Province of Zambia, with a grant from the copper mines. Up-to-date aerial photographs were essential in this wild country. In the move away from the old bush fallow system, fertilizers were introduced, cattle were introduced, and the Tse-tse fly, whose habitat could be identified on the photos, was brought under control with modern chemicals.

MSc Degree

When my next leave was due, I was sent to Tolworth (UK) to write a report on the development scheme. A map was required and I decided to use this for an advanced course at ITC – now a well-established and well-equipped institute. I completed a map of the Zambesi flood plain using the slotted-template method and finalized the report *Planned Rural Development in Northern Rhodesia*. It was later agreed that this report should count as an MSc thesis and I was awarded the first MSc degree issued by ITC. This led to an appointment in the Eastern Province of Zambia, where, using my acquired skill with aerial photos, it was possible to make a comprehensive plan to mitigate the serious land erosion. In 1966, I delivered a lecture at ITC at the 1st International Seminar on Integrated Surveys. More projects and more reports followed, taking me to different areas of Zambia, as well as the UK, Malaysia and later back to ITC. I arrived in the Nether-

lands with two big packing cases of materials and photos to work on a research project. To reduce expenses, I slept in my Bedford Camper at the camp site "Klein Zandvoort" for one guilder a day. Winter camping certainly entailed hardships: freezing conditions, poor cooking facilities, no hot water, and an 8-km walk/jog to ITC each day. Fortunately, the arrival of spring brought higher temperatures, tourists ... and warm water!

Publication

Work was progressing well and, with the arrival of a willing editor at my camper one night, progressed even better. We had collaborated previously in Zambia, which facilitated matters no end. Eventually my book *Animal-Producing Areas of Zambia* was published in two volumes: (I) *The Grasslands of the Cattle-Keeping People*,

and (II) *The Flood Plains* (with four maps). Although it was well received, unfortunately the PhD degree, which had been my aim, was not to be. Nevertheless, I wish to thank Professor Zonneveld and his staff for their considerable support – and of course I can look back on a rather remarkable winter at "Klein Zandvoort"



ITC building 1971-1996



Instrumentsroom at ITC

2002

- Accreditation of the MSc and Master degree programmes.
- Visit of HRH Prince Willem Alexander of the Netherlands.
- Start of the Geodata Processing and Spatial Information minor for the Bachelor course at the University of Twente.

2003

- Implementation of the alumni interaction system (including free e-mail account, access to ITC library services, software support, discussion groups) for maintaining and strengthening relations between alumni and the Institute.
- New Master course Geographical Information Management and Applications offered by ITC jointly with the universities of Delft, Utrecht and Wageningen.

Schermerhorn Lecture

Each year during the Opening of the Academic Year the Schermerhorn Lecture is given. The lecture is named after the founder of the institute and is the first lecture for the new students of that year. The purpose of this lecture is to highlight ITC's mission and strategies, giving a broad development perspective and looking to the future.



Schermerhorn Lecture 2015: Dr Wilbur Ottichilo

1969 - Dr. A.J. Pikaar, Former Director General Ministry of Education and Science
The Function of International Education in the Netherlands

1971 - Prof. Dr. J. Tinbergen, President United Nations Development Planning Committee
(winner of the Nobel Prize in Economic Sciences 1969)
International Education as an Instrument for Development Cooperation

1973 - Dr. A.H. Boerma, Director General FAO
Education and the Improvement of Agricultural Technology

1975 - Drs. J.P. Pronk, Minister for Development Cooperation
Priorities in International Education Aimed at Development

1976 - Dr. A.M. M'Bow, Director General UNESCO
Present and Future Role of Education in Developing Countries

1978 - Prof. Dr. Ir. A.J. van der Weele, Rector ITC
The Present Situation in International Education in the Netherlands

1980 - Dr. M.K. Tolba, Executive Director UNEP
Proper Environmental Management: The Challenge of the Eighties

1982 - Prof. Yash Pal, Secretary General UN Conference on the Exploration and Peaceful Uses of Outer Space
UNISPACE'82 and the Development of Earth Observation Systems

1984 - Dr. E.G. Hallsworth, University of Sussex, UK
Resources for the Future: The Measurement and Management of the Ultimate Limit to Growth

1986 - Drs. W.J. Deetman, Minister for Education and Science, and Drs. P. Bukman, Minister for Development Cooperation
The Next 35 Years

1988 - F. Mayor, Director General UNESCO
Geographical Information Systems for Managing Sustainable Development

1990 - Dr. L.J. Brinkhorst, Director General of the Environment, Nuclear Safety and Civil Protection of the European Commission
Priorities for the European Environment Policy in the 1990s

1992 - Dr. A. Ramachandran, Under-Secretary General HABITAT
Urbanisation and the Environment

1994 - Dr. J.M.M. Ritzen, Minister for Education and Science
Internationalisation: A Global Perspective

1996 - Prof. Dr. Ing. G. Konecny, Institut für Photogrammetrie und Ingenieursvermessungen, Hannover, Germany
From Photogrammetry to Spatial Information Systems

2004 - Dr. J. Dangermond, President of the Environmental Systems Research Institute (ESRI)
GIS and Geography

2005 - Dr. C. Augustinus, Chief, Land and Tenure Section, Global Division, UN-HABITAT, Nairobi, Kenya
Key Issues for the Future

2010 - Jan Pronk, former Minister for Development Cooperation
Dr Watson's Oversight

2011 - Dr. Robert Gilmore Pontius Jr, Professor of Geography at Clark University, Worcester, USA
Teach your Colleagues and Professors

2012 - Dr Jennifer Dungan, NASA Ames Research Center, USA
A view like no other: current understanding of Planet Earth through remote sensing

2013 - Barbara J. Ryan, Director, Group on Earth Observations (GEO), Geneva, Switzerland
GEO and International Collaboration – A Call for continuing the Schermerhorn Legacy

2014 - Dr Jane Bemigisha, CEO ESIPPS International
How to start a private business in GEO ICT

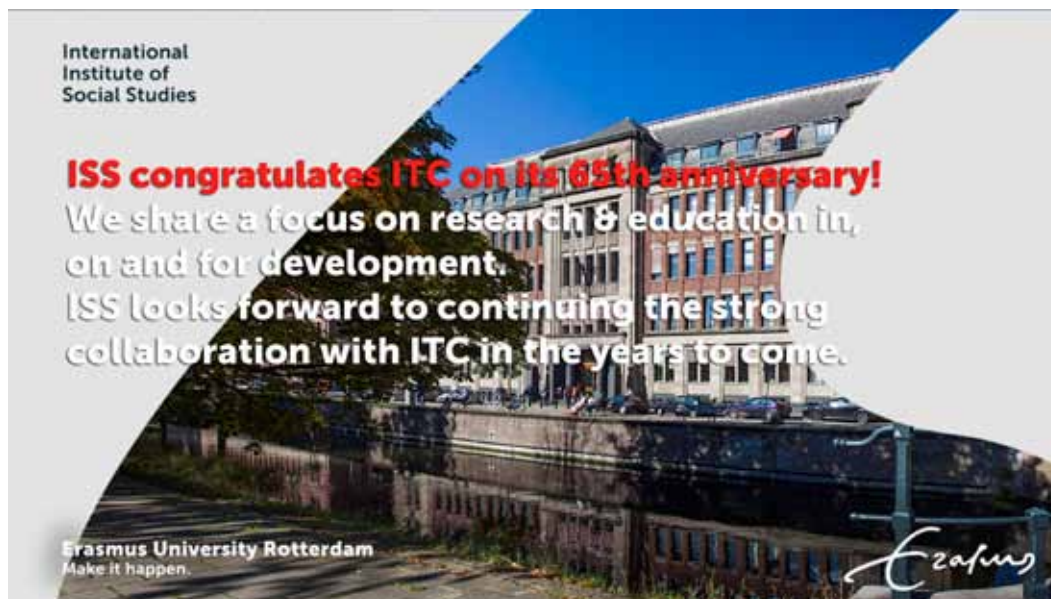
2015 - Hon Dr Wilbur Ottichilo, Member of Parliament Emuhaya Constituency Kenya
Requirements for Public Participation in Development Planning, Implementation and Good Governance: A case of Emuhaya Constituency in Kenya

2004

- First graduates of the joint ITC-Wuhan University MSc course.
- New MSc programme Geo-information Science and Earth Observation for Environmental Modelling and Management run by consortium of ITC, Southampton University (UK), Lund University (Sweden) and Warsaw University (Poland) in cooperation with the Erasmus Mundus programme.

2005

- First graduation ceremony of the joint ITC-IIRS Earth Resources and Environmental Geosciences course held at the Indian Institute of Remote Sensing.
- ITC appointed Associated Institution of the United National University (UNU).



GIM
INTERNATIONAL

GIM INTERNATIONAL CORDIALLY CONGRATULATES ITC – UNIVERSITEIT TWENTE – WITH ITS 65TH ANNIVERSARY!

During it's long life ITC has been a stronghold in the global geomatics community, educating many of the key-decision makers of nowadays and those of decades ago. The influence of the ITC in the development of this sector, not only now, but also years and years ago, is not to be underestimated. At the age of 65 one would think of retirement, rather than growing stronger, I think and hope the latter is the case for the ITC. Wherever GIM International can support and endorse the work of ITC, we will continue to do so in the future!

Once again, congratulations from the entire team of GIM International.

Durk Haarsma, publishing director GIM International

2008

- The University of Twente (UT) and ITC signed the official agreement regulating the integration of the two institutions with effect from 1 January 2010. ITC is to be embedded as the sixth, special faculty in the UT.
- ITC Alumni Nepal a "pro-active" body promoting GI and Earth Observation Science in Nep.

2009

- During the 59th Dies Natalis Rector Martien Molenaar passes on the rectorship of ITC to Prof Veldkamp.
- Former ITC Journal Achieved Higher Impact Factor of 1.947.
- ITC has signed Memoranda of Understanding (MoU's) with two Vietnamese universities to provide a framework for an academic partnership in education and research.
- ITC extends the current agreement with the United Nations University until 2014.

Asian Institute of Technology (AIT) Congratulates ITC with its 65 years of existence

Bajinder Pal Singh

Asian Institute of Technology (AIT)
ITC Alumnus GEM, 2008

bajinder@ait.asia

Sixty-five is a very important age in the life of a human being. This is the age when most employees retire, people start receiving old-age benefits, and doctors recommend a new physical regimen. But in the case of institutions like ITC, it may be the very reverse. This is the age when we need to consolidate on the 65 years gone by, review our achievements, and prepare for the next 35 years so that the transition into the new century is easy, seamless and meaningful.



It is in this context that these celebrations acquire a substantive meaning. Moreover, the celebrations are not restricted to ITC alone since everyone associated with ITC — be it a student, alumni, employee or partner, joins in the festivities and wishes it the very best in the decades to come.

For me, it is an occasion for some extra *pannekoeken and poffertjes*, since I once walked the portals of ITC as a student; and today, I am engaged with ITC via the Asian Institute of Technology (AIT), which is a partner institute of ITC.

To a very large extent, ITC and AIT have been engaged in similar work ever since they came into existence. Just like ITC, AIT too is tasked with imparting higher education, creating international networks, while simultaneously maintaining a steady focus on capacity building. Both institutions have worked for the cause of development, and their impact has transcended national and regional boundaries. Both are essentially postgraduate institutions that devote considerable resources to training and capacity building. Though ITC made the Netherlands its base and AIT has been hosted by Thailand, both cherish internationality; and AIT is very proud to have

emerged at the global top when it comes to international orientation in its student body, alumni spread, faculty members or Board of Trustees.

As the global development paradigm changes, and countries that were once regarded as undeveloped emerge as the new stars in the horizon, it is also time for everyone to take stock of the new emerging dynamics.

As Martin Molenaar, the former ITC Rector informed us on the occasion of AIT's Golden Jubilee celebrations in September 2009, "learning is no longer a onetime affair, but a lifelong process." Today, the landscape of education has altered beyond recognition, and what was relevant a few

years ago may become obsolete tomorrow, if it hasn't become redundant already. Online education, immersive learning, collaborative networks, open source publishing, and knowledge sharing are the driving forces propelling education and learning. As all of us come together to congratulate ITC on this momentous occasion, it is time to reiterate our commitment to its original mission while engaging with new platforms, benefiting from new age tools, tapping emerging technologies and exploring ways to reach out to a brave new world.

And the only way to do so is to grow up without growing old.

Gefeliciteerd!



Former ITC Rector Martin Molenaar at AIT



Marina van Damme award winner from AIT, Anh Nguyet

2010

- Former ITC rector Professor Martien Molenaar was decorated with Royal Honours as Officer in the Order of Orange – Nassau.
- Mr Carlos Salman Gonzalez, Director General of 'Sistemas de Información Geográfica (México)' and ITC alumnus (1975), received the Lifetime Achievement Award.
- The newly established Earth Observation community on 52North.org promotes the use of free near real-time environmental and Earth

Observation data (in-situ, airborne and space based) and derived products to a worldwide user community.

- H.R.H. Princess Maha Chakri Sirindhorn from Thailand paid a working visit to ITC.
- The overall quantity and quality of research conducted at the ITC Faculty has risen over the past three years, according to a recent review committee report.

ITC and Early Nuffic Project for International University Cooperation

Prof (Em) Herman Verstappen

hergraverstappen@planet.nl

The Netherlands Universities Foundation for International Cooperation (NUFFIC) launched a program for cooperation with universities in developing countries in the early 1970s.

This initiative was of considerable interest for ITC where students from all over the world came to learn about aerial surveys and related subjects as a prerequisite for development. One of the first projects proposed by ITC was the Serayu Valley Project, Java, Indonesia with the Gadjah Mada University in Yogyakarta as counterpart organization. It was rooted in earlier contacts of ITC staff, lasted three years and was followed up by complementary projects for about two decades. The ultimate success is unique. There are now about 2,500 students at a Faculty of Geography focusing on Geo-Information and Earth Observation with annexed educational center of the National Coordinating Body for Surveying and Mapping. There is an academic staff of 85, 1/3 of them holding a Ph.D. obtained at - or in cooperation with - renowned universities abroad. And all of this is accommodated in two 7-stories and two 4-stories buildings on the UGM-campus. Many people, particularly in Indonesia but also elsewhere, have in one way or another contributed to this success. I will restrict myself to mention the late Professor Kardono Darmoyuwono, first counterpart of the Serayu Valley Project, for his lasting drive that has made all this possible.

Another interesting project of NUFFIC's PUO program with ITC involvement was started in the so-called borderline countries Botswana, Lesotho and Swaziland around then Apartheid South Africa. The ITC took the lead in the first 3-year term of the project after which the Free University in Amsterdam (VUA) continued for many years. Also this project was quite successful and fully fledged universities now exist in each of these three countries. It is interesting to note that the decision of the VUA to adopt the project was a response to strong student protests against its traditional university contacts in South Africa. When these had come to an end the students in turn agreed with continuation of the cooperation in Yogyakarta in spite of their objections against the military regime then prevailing in Indonesia. A third NUFFIC project where ITC played an important part was located in Sri Lanka.

Unfortunately it had to be abandoned in an early stage due to a long lasting period of political unrest in that country. It demonstrates that dedicated input and enthusiasm are effective only after many years and in a peaceful environment.

In the Netherlands these projects gave a strong impetus to ITC's university contacts. This is an often underestimated result of them. Working jointly with various departments, groups and individual researchers in a project resulted in understanding for each other and in appreciation for the ITC approaches. The same applies in fact also to the internal contacts at ITC. We still benefit of them.



Professor Herman Verstappen (right) together with Professor Hans van Ginkel, former chair of the ITC Board and Honorary Fellow (2000)

2011

- ITC Library has set up a book and journal donation program for all its partners from projects that the ITC Library participates in and the ITC Joint Educational Programs.
- A student chapter (ISCI) of the International Association for Mathematical Geosciences (IAMG) was founded by a group of enthusiastic students and staff members at ITC.
- A new joint MSc degree course, implemented in collaboration with the Vietnam National University – University of Science (VNU-US), previously known as Hanoi University of Science (HUS) was officially launched in Hanoi, Vietnam.

2012

- The International Society for Photogrammetry and Remote Sensing (ISPRS) selected Professor Martien Molenaar as ISPRS Fellow.
- ITC's 200th PhD Student Dr Yijian Zheng Graduates Cum Laude.
- The Library of the Faculty of Geo-Information Science and Earth Observation (ITC) of the University of Twente donated educational textbooks to the Federal Polytechnic, Ado-Ekiti in Nigeria.

The Dutch Cadastre Congratulates ITC

Chrit Lemmen, Het Kadaster

c.h.j.lemmen@utwente.nl

The United Nations 2030 agenda for sustainable development includes access to ownership and control over land for all men and women – in particular the poor and vulnerable. The challenge for the global land professionals is clear: secure land rights for all people, at all places, at all times. Therefore innovative thinking is needed. Coupled with quickly maturing scalable approaches in land administration that can be applied globally. The approaches in responsible land administration as developed at ITC is of crucial importance in the achievement of this.

ITC alumni contribute to developments in mapping agencies and cadastres world-wide. Kadaster has a co-operation with ITC since several decades in research, education and training and consultancy in the area of land management and administration and the development of geo-information services. Academic and professional xenogamy proved to be effective.

The Netherlands Cadastre, Land Registry and Mapping Agency – Kadaster – congratulates ITC with the 65th Dies Natalis. We look forward to further co-operation in support to the development of a better world for the next generations.

kadaster



Land administration is needed for the development of a better world for the next generations. *Courtesy Kadaster*

2013

- ITC and Beijing Normal University signed a memorandum of understanding (MoU) and agreement at Beijing Normal University (BNU).
- A consortium of thirteen organisations and institutes including ITC has been granted an award of 997.541 Euro for a project on Earth Observation for Economic Empowerment (EOPOWER).
- 10 years of GIMA - A joint Msc programme from Delft University of Technology, Utrecht University, Wageningen University and ITC.

2014

- The department of Earth Systems Analysis of the Faculty ITC is coordinating partner of the Geothermal Capacity Building Programme – Indonesia-Netherlands (GEOCAP).
- ITC receives a research grant of 7.5 million US\$ from the Bill & Melinda Gates Foundation to help the world's poorest people. The project called STARS, which stands for Spurring a Transformation for Agriculture through Remote Sensing, will identify how earth observation data

Alumni are of Great Importance to us!

I would like to congratulate ITC and the alumni with their 65th anniversary.

Han Dommers, Head of the Education Promotion Department

Great to see so many of you involved, and thank you all for staying connected to the Netherlands!

ITC has one of the most active alumni networks worldwide and still growing. We would like to express our appreciation of all the activities that take place in Enschede and the rest of the world to maintain close ties with the Netherlands.

As alumni of a Dutch higher education institution, you are of great importance to us. Alumni are part of the strategic agenda

at EP-Nuffic and we plan to intensify alumni activities over the coming 5 years in the Holland Alumni Programme 2016-2021.

Areas of focus will include closer cooperation between the national and local networks, and the exchange of expertise on the development and maintenance of good alumni relations. We would highly value your input for the Holland Alumni Programme as well.

Once again, congratulations on the 65th Dies Natalis of ITC! Wishing you a great celebration on 17 December.

On behalf of EP-Nuffic
Han Dommers
Head of Education Promotion Department



IHS wishes a Happy Anniversary

"It has been 65 years of relevant knowledge for developing countries. But it's not yet time to retire!" says the IHS Deputy Director. "On the contrary, let's continue working together on research, education and projects much more in the future."

IHS and ITC have a long history of working together on postgraduate education, research and project services to exchange and create knowledge with a common goal. Both are focused on capacity building and institutional development in developing countries and emerging economies with long-standing experience.

For this long-standing partnership, Kees van Rooijen, the IHS Director extends his warm acclamation: "IHS congratulates our highly valued colleagues from ITC with their celebration." Carley Pennink, IHS Head International Projects, gives her best wishes while adding: "Our closest sister, happy anniversary! We hope to

continue working on many more successful projects. We enjoyed working with you over the years, focused on the same countries and complementary services. All the best in the future and we hope to continue our work together!"

It has been a real pleasure working with you!

Happy 65th anniversary from IHS!



products may help improve current information and decision support systems in the smallholder economies of sub-Saharan Africa and South Asia.

- Minister Lilianne Ploumen (Foreign Trade and Development Cooperation) opens the 2014-2015 Academic Programme.
- Her Royal Highness Princess Margriet visited the ITC.
- President Indonesia appoints ITC alumna Siti Nurbaya to new cabinet.

- ITC, together with VITO and Particip, will receive an amount of three million Euros, financed by the European Development Fund, to provide trainings on earth observation in Africa.

INSTITUTE NAME

1950 International Training Centre for Aerial Survey (ITC)
 1968 International Institute for Aerial Survey and Earth Sciences (ITC)
 1985 International Institute for Aerospace Survey and Earth Sciences (ITC)
 2001 International Institute for Geo-Information Science and Earth Observation (ITC)
 2010 Faculty for Geo-Information Science and Earth Observation (ITC), University of Twente



With effect from 1 January 2010, the International Institute for Geo-Information Science and Earth Observation (ITC), established in 1950, became embedded as faculty in the University of Twente (UT), and is henceforth to be known as the Faculty for Geo-information Science and Earth Observation (ITC), University of Twente. This was not the first time ITC changed its name though the abbreviation has always been the same.

STUDENT HIGHLIGHTS

1951 First certificate issued to Mr. L.J. Miranda-Ruiz from Venezuela
 1952 First diploma issued to Mr. F.J. Doyle from the USA
 1989 HRH Princess Maha Chakri Sirindhorn of Thailand follows tailor-made short course
 1990 First PhD degree issued to Mr. J. Akinyede from Nigeria
 1991 The 10,000th student registered: Mrs E.A. Briones from the Philippines
 1996 The 1,000th MSc degree issued to Mrs R.C. López Binnqüist from Mexico
 2003 The 100th PhD degree issued to José Laurindo Campos dos Santos from Brazil
 2009 The 20,000th student registered at ITC
 2012 The 200th PhD degree issued Cum Laude to Dr Yijian Zeng from China



ITC LOGO

Sculptor Charles Hammes designed the so-called Kronkel for the Institute's premises. This became the ITC logo and is recognised throughout the world. A broad continuous strip represents the Earth, around which a figure that can be seen as a bird or an aeroplane is flying - symbolising aerial mapping

2015

- ITC four times in Elsevier top 100 of most-downloaded papers.
- ITC Alumnus Adewale Akingbade appointed Executive Director RECTAS (Nigeria).
- ITC's MSc Geo-Information Science and Earth Observation can proudly bear the 'Top-class programme' quality seal for a year.
- Marina van Damme Scholarship for Vietnamese Dang Anh Nguyet.
- The academic Master of Science degree programme of Geo-information Science and Earth Observation has received a renewed accreditation by NVAO, the Accreditation Organization of the Netherlands and Flanders.
- ITC celebrates its 65th Dies Natalis with an ITC Alumni Meet in Enschede.

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| ✓ 3D Visualisation/Modelling | ✓ DTM - Digital Terrain Model | ✓ Hyperspectral Imaging | ✓ Radio Navigation |
| ✓ Addressing Technology | ✓ Dynamic Mapping | ✓ Image Analysis | ✓ Remote Sensing |
| ✓ Aerial Imagery/Photography | ✓ Earth Observation | ✓ INSPIRE | ✓ Risk Management |
| ✓ Asset Management | ✓ Emergency Services | ✓ Integration | ✓ RTK (Real Time Kinematic) Surveying |
| ✓ Bathymetry | ✓ ENC - Electronic Navigation Chart | ✓ Interoperability & Open Standards | ✓ Satellite Imagery/Navigation |
| ✓ Big Data | ✓ Environmental Monitoring | ✓ Land Information Systems | ✓ Scanning Technology |
| ✓ Business Geographics/ Analytics | ✓ Galileo | ✓ Laser Scanning | ✓ SDI - Spatial Data Infrastructures |
| ✓ Cadastral Mapping | ✓ Geo-ICT | ✓ LBS | ✓ Smart Grids |
| ✓ Cartography | ✓ Geodesy | ✓ LiDAR | ✓ Software |
| ✓ Climate Change | ✓ Georeferencing | ✓ Mapping Software | ✓ Surveying Instrumentation |
| ✓ Computing in the Cloud | ✓ Geosciences | ✓ Marine Tracking & Navigation | ✓ Surveying Technology Sensor |
| ✓ Crime Mapping/ Modelling | ✓ Geospatial Image Processing | ✓ Mobile GIS/Mapping | ✓ Telematics |
| ✓ Data Capture/Collection | ✓ GIS | ✓ Municipal GIS | ✓ Topographic Mapping |
| ✓ DEM- Digital Elevation Model | ✓ GIS in Agriculture & Forestry | ✓ Navigation | ✓ Total Station |
| ✓ DGPS - Differential GPS | ✓ GLONASS | ✓ Network Topology | ✓ Tracking & Route Planning |
| ✓ Digital City Models | ✓ GMES | ✓ NSDI | ✓ Transport |
| ✓ Digital Mapping | ✓ GNSS | ✓ Open GIS | ✓ Utilities GIS |
| ✓ Digital Rights Management | ✓ GPS | ✓ Photogrammetric | ✓ Vehicle Tracking & Navigation |
| ✓ Disaster Management/ Monitoring | ✓ GSDI | ✓ Photogrammetry | ✓ VRS - Virtual Reference Station |
| ✓ DSM - Digital Surface Model | ✓ Hardware | ✓ Point Clouds | ✓ Web Mapping |
| | ✓ Hydrography | ✓ Property Information Systems | |

Sectors covered:

- | | | | |
|-------------------------------------|----------------------------|-------------------------------|------------------------------|
| ✓ Aerospace | ✓ Defence | ✓ Healthcare | ✓ Public Safety/Works |
| ✓ Agriculture | ✓ Education | ✓ Infrastructure Protection | ✓ Retail |
| ✓ Archaeology & Heritage | ✓ Emergency Services | ✓ Insurance | ✓ Shipping |
| ✓ Architecture | ✓ Energy Utility | ✓ Manufacturing | ✓ Software Development |
| ✓ Biosecurity | ✓ Engineering | ✓ Marine | ✓ Technical Services |
| ✓ Business Security/Service | ✓ Environmental Management | ✓ Military | ✓ Telecommunications |
| ✓ Central/Local/Regional Government | ✓ Environmental Monitoring | ✓ Mining | ✓ Tourism/Travel |
| ✓ Construction | ✓ Financial Services | ✓ Natural Resource Management | ✓ Training |
| ✓ Consulting Services | ✓ Fisheries | ✓ Oil & Gas | ✓ Transport |
| ✓ Cyber Security | ✓ Forestry Management | ✓ Property | ✓ Utilities (Energy & Water) |
| | ✓ Geosciences | | |

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