

# International Scientific Symposium on 'Not Just a Scientific Topic Anymore'

Scientists met other scientists, listened to each other's presentations and exchanged knowledge on remote sensing and satellite images. Setting: sunny Enschede, the Netherlands, at the International Institute for Geo-Information Science and Earth Observation (ITC), May 8-11.

By Sonja de Bruijn



Getting to know each other, with John van Genderen, President of the ISPRS Technical Commission VII, in the middle.

## Pre-symposium Events

For some of the 500 attendees, mostly scientists from all over the world, the mid-term symposium on 'Remote Sensing: From Pixels to Processes' meant meeting each other again, and refreshing memories from the past when being a student at ITC. Although the meeting officially started May 8 there were pre-symposium events on May 6, and a visit to the Keukenhof Gardens in Lisse, the Netherlands, one day later, could be found on the program list as well.

Naturally the technical sessions on topics like 'Advanced Classification Techniques', 'Information Extraction from Hyperspectral data' and 'OpenDragon: Free GeoInformatics Software for Education in Developing Countries' were dominant during the official four symposium days. According to John van Genderen, President of the ISPRS Technical Commission (TC) 7 (see information on ISPRS elsewhere in this article), calibration and vali-

dation of data, as well as data fusion and data mining, are 'hot topics'. He tells about the project undertaken by one of the several working groups of TC VII on data fusion. "One type of data is not sufficient to solve a problem. Besides doing optical observations you can do radar or thermal measurements in order to observe the earth. This means you have to fuse optical, radar, thermal but also hyperspectral, statistical or perhaps even historical data of high quality."

Another topic is data mining. Van Genderen: "It means being able to extract a specific type of information from data that is stored in some place and possibly thirty years old. Software is currently being developed that is capable of extracting certain values of certain areas over time. This enables a precise comparison of data from the past and the present."

Van Genderen is quite enthusiastic about one

The International Society for Photogrammetry and Remote Sensing (ISPRS, [www.isprs.org](http://www.isprs.org)) is a non-governmental organisation aimed at enhancing international cooperation between worldwide organisations with interests in photogrammetry, remote sensing and spatial information sciences. It consists of nearly 100 national and 10 regional societies and organisations and its scientific and technical programs are organised by eight Technical Commissions. Each Commission holds its own mid-term symposium within its country once every four years. Commission VII concentrates on Thematic Processing, Modelling and Analyses of Remotely Sensed Data. This Commission, led by President John van Genderen, is based in the Netherlands and from May 8-11 they organised their symposium called 'Remote Sensing: From Pixels to Processes' at ITC, the Netherlands. In the Olympic years all Commissions come together, with Beijing being the location of this congress in 2008, one month before the Games get started.

working group that deals with 'Innovative methods for less developed countries'. He explains why he likes this project so much: "These people often don't have all the fantastic devices we have but show a lot of creativity in solving problems in their country by using remote sensing data. The nice thing is that you see a transfer from technology and knowledge between the western world and these less developed countries. We learn from them, which accelerates solutions."

## Relation

Prices of satellite images are going down, but especially high-resolution images can still be quite expensive. Van Genderen however thinks cost is not a real issue. "It is all about the relation between overall costs and the costs of the images needed. If you can retrieve a lot of information from these data, like the localization of new energy resources, costs are not really the issue anymore." He continues: "When looking at an infrastructural project the costs might be neglectable, however for a municipality that needs high-resolution images on a monthly basis, for example to detect changes in infrastructure or vegetation, it

# Remote Sensing in the Netherlands

might still be too expensive. An IKONOS stereopair image of let's say 11 km square size will cost \$ 12,000 to \$ 15,000, and then there's additional costs for things like the software needed to work with these data. In Europe a satellite image will cost you about € 100. Now that ORBIMAGE (Quickbird) has taken over Space Imaging (IKONOS) to form GeoEye and thus covering the larger part of the market, there is not that much competition at the moment. But I guess new players will enter the market soon and this might bring the price further down."

## Technical Education

So costs are not the bottleneck, but what is? "Education", is Van Genderen's firm answer. "Though working here at ITC I have to admit that the focus has been too much on technical education. People studying at ITC going back to their own country usually become active on a technical level. Of course some of them end

ITC, the International Institute for Geo-Information Science and Earth Observation ([www.itc.nl](http://www.itc.nl)), is located in Enschede, the Netherlands. The scientific staff consists of around 130 professionals from more than 30 countries. Essential at ITC are international knowledge exchange, as well as the focus on mid-career professionals who can potentially influence decision-making processes within their organisations. The Institute offers two degree programmes, a Master of Science (MSc) and a Master degree programme in Geo-information Science and Earth Observation. Diploma and certificate programmes are also offered. The degree programmes cover the following courses:

- Applied Earth Sciences;
- Geo-information Management;
- Natural Resources Management;
- Water Resources and Environmental Management.
- Geoinformatics;
- Land Administration;
- Urban Planning and Management;

Besides these international educational programmes ITC provides research and project services with respect to geo-information science and earth observation using remote sensing and GIS.

up in management or politics, and these people are aware of the possibilities of remote sensing. However it is really essential that all decision makers are aware of these possibilities, because unfortunately this is not the case. But also municipality workers need to know how to work with things like GPS. They

never learnt how to do this at school. Information on these techniques should be brought into the open; it is not just a scientific topic anymore."

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