ASIAN SPOTLIGHT

THE LATEST NEWS AND PRODUCTS FROM ASIA

SUPERGEO SUPPORT FOR GIS EDUCATION IN TAIWAN

To meet a rising demand for geospatial skills in the south of Taiwan, SuperGeo Technologies of Taipei has co-founded the GIS Education Centre within the Geography Department at National Kaohsiung Normal University **(www.nknu.edu.tw)**, one of the country's most highly-regarded seats of learning.

As well as its educational role, the new Centre will act as a bridge between research and industry and provide customisable support to local government, other educational institutes and private enterprises.

The Centre will initially focus on the needs of students, educators, and public officials who seek geospatial knowledge and professional GIS training. In the future, it will widen its focus to encompass various GIS-related projects and offer a GIS certificate program to satisfy the growing demand for geospatial skills in the domestic job market.
www.supergeotek.com

JOINT VENTURE FOR POYNT IN CHINA

Poynt Corporation, the Canadian developer of a convenient and timesaving GPS-enabled mobile local search and advertising platform, has launched an Asian operating entity, Poynt Asia (Hong Kong) Limited, and formed a joint venture between the new entity and China Youth Goyor Technology (Beijing) Co, Ltd, a commercial arm of the China Youth League (**www.ccyl.org.cn**).

The joint venture will focus on obtaining Chinese Ministry licenses that are required to secure data service and preload agreements with major telecom companies in China, and facilitate use of the Poynt mobile platform among China Youth's 83 million members.

"We are at an exciting inflection point for Poynt Corp. with significant opportunities for growth and expansion," said Andrew Osis, CEO, Poynt Corp. "The announcement of our agreement with China Youth League high lights the valuable experience the Poynt Platform provides users globally and we look forward to leading the industry in providing a valuable service to the Asian marketplace."
www.poynt.com

NEW AVEVA OFFICE IN KOREA

A new office that incorporates a dedicated product training centre has been opened in Seoul, Korea, following increased demand for **AVEVA** solutions (which include the LFM laser scanning software suite acquired from Z+F UK Limited in 2011). The office will also host sales, marketing, product support, and administration functions for new and existing customers in Korea.
www.aveva.com

LIDAR WORKSHOPS IN MALAYSIA

3D Laser Mapping is conducting a series of educational workshops in Malaysia in collaboration with local surveying company Jalal Johari Consultants. The LiDAR Applications Workshops provide an overview of data collection methods; explore data processing and extraction methodologies, and present examples of real world projects. They will be of particular appeal to those engaged in highways design & maintenance, urban design, drainage, hydrography and mapping.
www.3dlasermapping.com

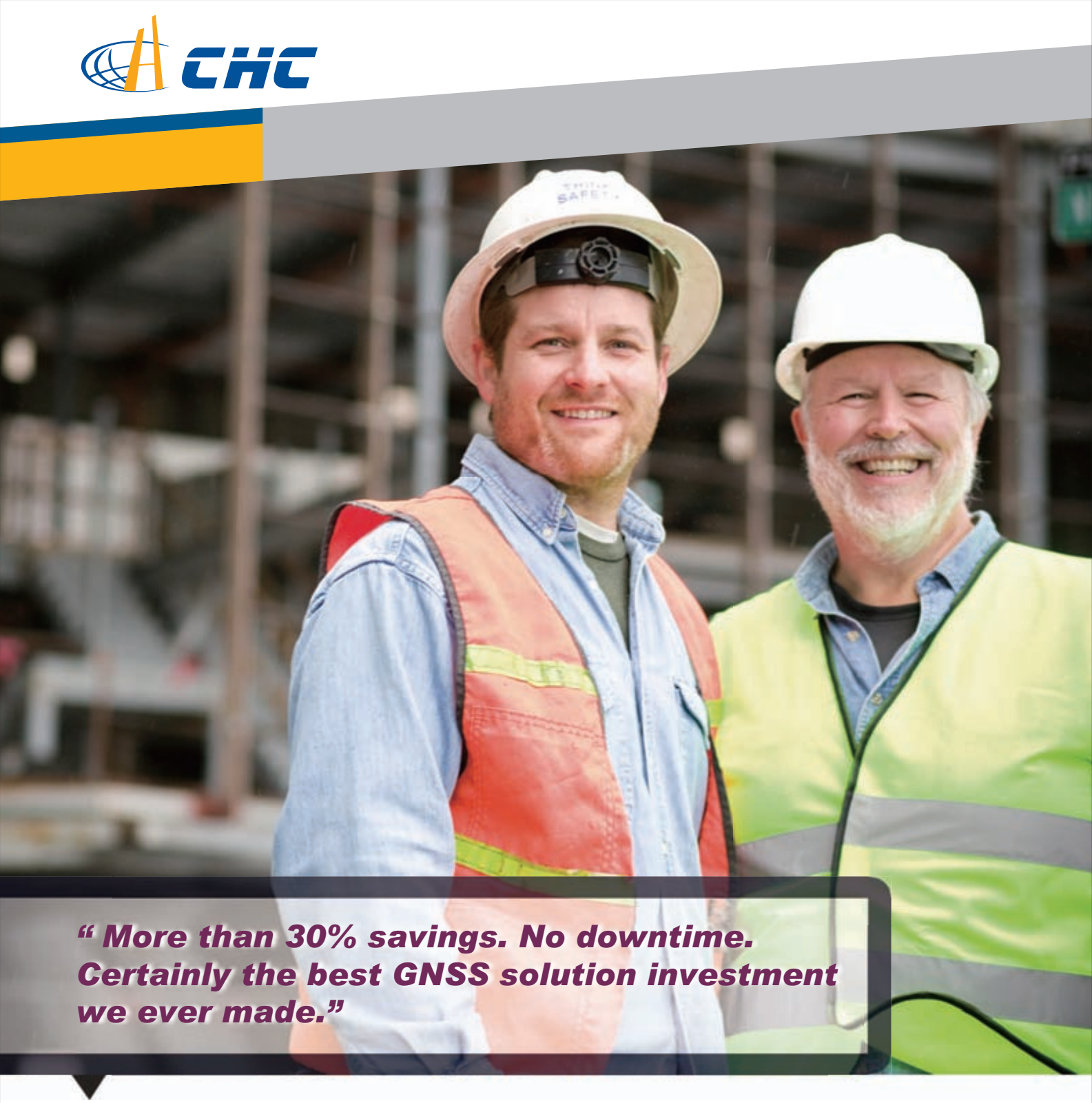
GEOCONCEPT IN INDIA

GeoConcept of France has established a commercial subsidiary in Chennai, India, to serve public and private sector markets and to develop a partner network. The move adds to the company's existing overseas subsidiaries in China, Spain, Japan and Switzerland. GeoConcept solutions are currently available in seven languages and in use with more than 10.000 customers in 30 countries.
www.geoconcept.com

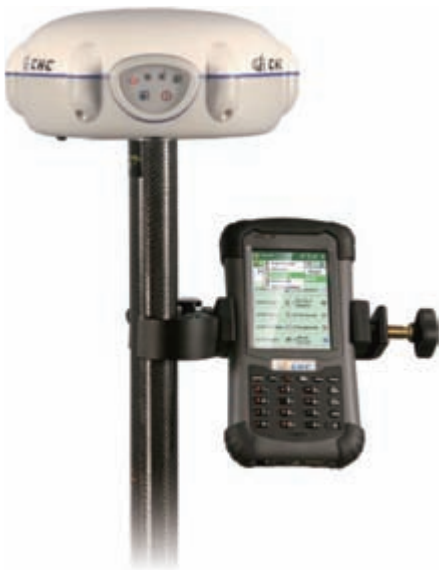
OZRI 2012, SYDNEY

To be hosted by **Esri Australia**, the Ozri 2012 conference promises to be one of this year's largest GIS events in the Asia-Pacific region. It will convene at the Sheraton on the Park hotel in Sydney, New South Wales, 5-7 September, under the banner 'A Spatial Odyssey – Exploring new frontiers in GIS' and is being designed to engage and inspire the next wave of GIS adopters.
http://esriaustralia.com.au/events

Ozri 2012 conference to be held at Sheraton on the Park hotel in Sydney



“ More than 30% savings. No downtime. Certainly the best GNSS solution investment we ever made.”



Outstanding performances at a fraction of the cost

The X91 GNSS RTK brings together world leading 220 channels GNSS technology, ultra-rugged field computer with integrated 3.5G modem for seamless RTK corrections management, and versatile data collection software.

By combining decades of positioning and surveying know-how, the X91 GNSS is one of the most powerful GNSS RTK solutions at a price point that every surveyor can afford.

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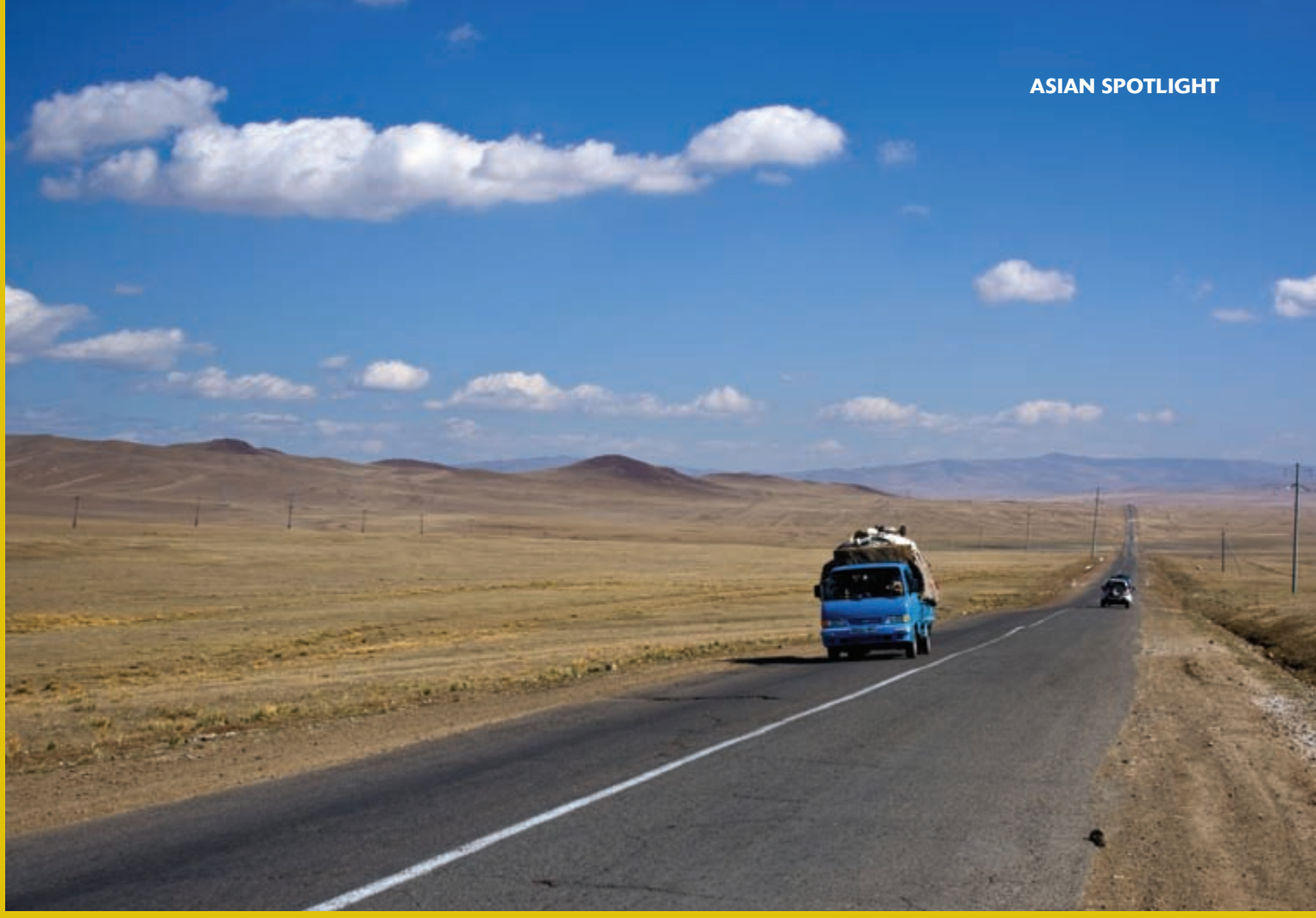


MONGOLIA: ON THE OPEN ROAD

AS PART OF A GERMAN-FUNDED CAPACITY-BUILDING EXERCISE, AN INTENSE FIVE-DAY WORKSHOP ON GEODATA MANAGEMENT WAS CONDUCTED IN THE ASIAN REPUBLIC AT THE END OF 2011 USING FREE AND OPEN SOURCE SOFTWARE AND OPENSTREETMAP (OSM). HINRICH PAULSEN, JOHANNES WESKAMM AND DANIEL KOCH DESCRIBE HOW THE EMPOWERMENT OF LOCAL USERS PROMISES LONG-LASTING BENEFITS

With climate change and rapid urbanisation threatening already fragile water resources in Mongolia[1], the German Federal Ministry of Education and Research (BMBF) is funding MoMo (Model Region Mongolia), a research project within its Integrated Water Resources Management in Central Asia programme that involves a consortium of German universities and private sector companies.

As well as scientific disciplines such as hydrology, ecology and sanitary environmental engineering, there are two further aspects to the MoMo project. One is concerned with capacity-building, i.e., the transfer of knowledge from German to Mongolian project partners, while the other seeks to establish a Spatial Data Infrastructure (SDI) through which all MoMo sub-projects can make their data available to the Mongolian side in a sustainable way.

An abundance of geodata

In total there are 12 MoMo sub-projects generating an abundance of geodata, be it point information or raster-based model results. Also, most sub-projects rely on geographic background data with which to locate their research activities. In the current (second) three-year phase of the project, it was decided to implement a professional SDI as much of the data collected in phase one was not accessible from a central location. This was, in part, due to the change in individuals and organisations between phases.

Another aspect worth mentioning is that while a considerable amount of geodata is available from Mongolian sources, it is not always readily shared – one reason why not all project participants were aware of the geodata already available. The SDI being put in place is intended to remedy these deficiencies.

Training concept

In considering the complexities associated with an SDI, the key question was how to train the Mongolian side in a meaningful way? The target audience consisted of 25 students and teachers from the University of Agriculture and the University of Science and Technology in Darkhan,

Mongolia's second largest city. As most were non-experts in the field of geoinformatics, the training had to be neatly aligned with the overall concept of sustainable capacity development. This was achieved on two fronts: by providing a detailed overview of how to process, analyse and visualise geodata, and then by helping participants create their own geodata by mapping parts of the city.

For this purpose the OpenStreetMap platform was chosen as it satisfies numerous requirements for sustainable capacity development. These can be summarised as follows:

Quick and easy: For mapping purposes, relatively simple and relatively cheap devices are needed (GPS-receiver, digital camera). Furthermore, there are free software tools (e.g. *JOSM (Java OpenStreetMap Editor*) with a broad community base that make it easy for beginners to start editing geodata.

Open data: Geodata that is collected and tagged is not only available within the project but is completely free. In addition, it is possible to download and edit all raw data.

Sustainable: Even when the MoMo project has ended, OpenStreetMap will continue to exist and the data will continue to be available. Another aim of the geodata management workshop was to introduce the participants to collaborative projects and to generate some interest in these.

OpenStreetMap

The availability of geodata is often one of the biggest and costliest problems when realising projects with a geographical context. In 2004, an Englishman called Steve Coast came up with the idea of creating a free world map using Wiki technology. The target was to put the data under a license that everyone could use as they saw fit without having to worry about costs or other issues. OpenStreetMap was born. What seemed a very ambitious, if not crazy idea at the time, has now borne impressive fruit: In the eight years since its inception, the number of registered users has risen from a handful to 500.000 with numbers still growing. Also, more and more organisations see the benefit of open geodata and are donating their own datasets to OSM, thus steadily increasing its scope and quality.

The mapping situation in Darkhan proved to be ideal for OSM newcomers: At the beginning of the workshop, only a few features such as the city limits, city centre streets and railway station were mapped in OSM. The objective was to expand the road network for navigation purposes and to map Points Of Interest (POIs) of particular concern to the project, e.g., water kiosks located in communities characterised by *yurts* or *gers* (the portable wood-framed dwellings traditionally used by nomads in Central Asia).

Results

Both the idea behind OSM and how it works was previously unknown to workshop participants. After an initial briefing on the project, the first question was: "Why collect spatial data (in the Mongolian cold!) when Google offers it free of charge?" We discussed the philosophy of open (geo-)data and its consequences in great detail. To sum up: OSM data is free and can be used for any project. In addition the raw data is also accessible, and can be corrected with local knowledge should there be any errors.

After introducing how a GPS works and processing some example datasets, small groups were formed and mapping areas assigned. After three working days under the deep blue Mongolian sky, substantial data was collected, edited and committed to OSM. The road network was almost completed and numerous POIs (e.g. gas stations, hotels, shops, universities, etc.) were referenced. See Figs. 1-4 for examples. Please note that this data was created in just three days by complete beginners!

After five days of intense practical work, a number of those attending the workshop commented on how rewarding it was to be able to go out with a GPS, pen and paper, and return after a few hours with good quality geodata. Any data that proved to be not quite right was easily corrected, thanks to the wiki nature of the platform.

Outlook

Another finding of the workshop was the perception that more people should be made aware of the possibilities of crowd-sourcing their own data without the need for costly equipment or other resources.

Accordingly, it is now planned to incorporate the use of Free and Open Source Software into university lectures in Mongolia. The strong point of OSM - the ability to easily map change using local skills and local knowledge – will meet the needs of many as Mongolia's transition to a market economy poses the challenge of balancing social, environmental and economic needs.

[1] "Urban Water Vulnerability to Climate Change in Mongolia" a March 2011 report by the Mongolia Water Authority and the United Nations Environment Programme (UNEP)

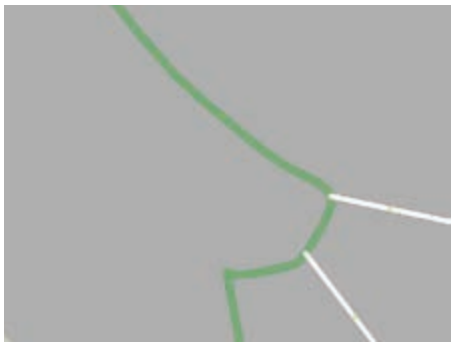
Useful Links

Free Software Foundation: http://www.fsfe.org/about/basics/freesoftware.en.html
MoMo project homepage: http://www.iwrm-momo.de/
OpenStreetMap project: http://www.openstreetmap.org
The Mongolian University of Science and Technology (MUST): www.must.edu.mn
German Federal Ministry of Education and Research (BMBF): www.bmbf.de

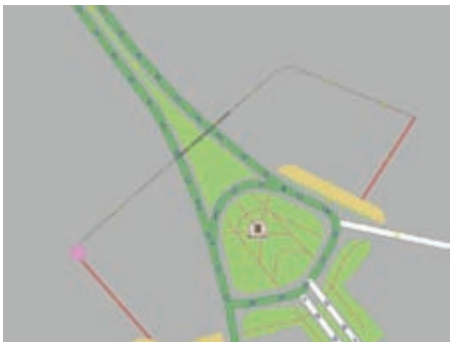
Dipl.-Geogr. Hinrich Paulsen is General Manager, while Dipl.-Geogr. Johannes Weskamm and B.Sc. (Geography) Daniel Koch are Application developers, all with terrestris GmbH & Co. KG of Bonn, Germany (www.terrestris.de)

Fig.1: A residential district in south Darkhan. Here, the road network is incomplete and there is only one POI (without a road showing the way). © *OpenStreetMap contributors, CC-BY-SA*

Fig.2: The same district, post-workshop, with an extended road network (including one-way streets) and the addition of several POIs (hospital, universities). © *OpenStreetMap contributors, CC-BY-SA*



Roundabout in central Darkhan. This pre-workshop image shows just the main street, only part of the roundabout, and lacks detail. © *OpenStreetMap contributors, CC-BY-SA*



The same roundabout post-workshop. Here, the roundabout is complete and details such as one-way traffic flows, footpaths and parking lots have been included. © *OpenStreetMap contributors, CC-BY-SA*