

# INTERGEO 2005 DÄ¼SSELDORF, GERMANY Â€“ A PREVIEW

## Exceeding All Limits

This yearâ€™s Intergeo, to be held at the Exhibition Centre in DÄ¼sseldorf, Germany from 4th to 6th October, is expected to exceed all limits. With opening extended to three whole days and exhibition space to 10,000m<sup>2</sup>, it certainly looks as though big things are expected. And if organiser Hinte-Messe predictions prove correct, some 17,000 visitors and 1,500 conference delegates will attend. Nearly five hundred exhibitors have booked a stand at the trade-fair.

It is not only in statistics limits are being pushed. The theme of 'Exceeding limits' reflects a wish to increase awareness of European expansion, globalisation and its effect on the use of geo-information. To succeed in the future the geo-industry needs to think and act without frontiers. It is fully aware of this and much attention will be given to the subject during the conference. Cross-border projects with The Netherlands will also feature prominently on the agenda.

### Internationalism

But the wording of the theme does pose some crucial questions concerning the international character of Intergeo. This event is known as the biggest trade-fair in Europe. Greater international participation might therefore be expected. Last year only about 13% of visitors, 3-5% of conference delegates and 19% of exhibitors came from abroad. This is no wonder, given that the conference language was mainly German. People can't be expected to cross the world simply for a trade-fair. Next year, however, the conference will run parallel with a FIG conference, so more content will be in English. If this goes hand in hand with promotion of international contributions it may result in more international conference delegates, thus more international visitors to the exhibition. Conclusion: if Intergeo continues to exceed its limits, it has much potential.

### Trade-fair

There will be five hundred participant companies from 24 countries at the Intergeo trade-fair this year. Of these many responded to our call to preview products they planned to launch at the show. This resulted in the following compilation.

#### 123CAD Ingenieursoftware

123CAD Ingenieursoftware, a German software developing company, is exhibiting at Intergeo for the first time and introduces new civil engineering software 123CAD and software rental system. The company will also showcase AutoCAD-based civil engineering software for the first time. 123CAD covers all relevant areas of road & sewer planning, as well as general civil engineering. To provide engineering and construction companies with modern and market-oriented civil engineering software, 123CAD can be rented on a project-oriented basis, so that costs arise only when the software is needed for a certain project.

**Stand number: G3.213**

#### 52°North

52°North (Germany) is an international open-source initiative the goal of which is to develop software solutions for capturing, analysing and visualising spatial data in open geodata infrastructures and geoservice infrastructures. New products released are 52N Web Security Service and 52N Sensor Observation Service. The 52N Web Security Service protects OGC Web Services such as the Web Map Service (WMS) or the Web Feature Service (WFS) from unauthorised access, without sacrificing interoperability, implementing current North Rhine-Westphalia spatial data infrastructure (GDI NRW) Web Security Service 1.1 draft specification. Applications include protection of internal geodata and geoservices or those having limited public access within otherwise freely accessible geodata and geoservice-infrastructures, as well as logging use of services within an organisation for recording internal performance. Protection is implemented by means of pluggable authorisation modules: so-called interceptors that perform access control for a specific resource. The interceptor framework allows rapid development of customised interceptors.

The 52N Sensor Observation Service enables access to real-time geosensor data via a Web-based interface. This product implements the current OGC Sensor Observation Service 0.9 draft specification. It also provides the active pattern that enables users to register threshold value conditions for specific observables and send O&M encoded data if the condition is met. The 52N Sensor Observation Service allows interoperable provision of geo-referenced measurement data and as a result is easily integrated. In situ sensors (e.g. water gauges) and remote sensing sensors can be used for data collection.

**Stand number: J3.109**

#### ADW Software

Based on the Pythagoras CAD platform, ADW Software (Belgium) has developed a new GIS module. Some of the possibilities include easy but powerful queries combined with clear presentation techniques, integrated Pythagoras database, link with existing external databases like MS Access, Oracle, SQL, adding attributes to graphical objects, mix of powerful CoGo functions and database functions within one program and generation of (MS Word) documents based on queries. The module is customisable through VBA.

**Stand number: C3.114**

#### AED-SICAD

AED-SICAD (Germany) a GIS application provider, is offering standard applications and tailor-made solutions based on ArcGIS for utilities, land management and local authorities. New product lines represent maximum integration ability, openness and investment security. At Intergeo we will present the new version of ArcFM UT, featuring integrative efforts within the entire company, scalable from municipal utilities to multi-utility corporations, use of network data in business processes, SAP integration for efficient service and maintenance, mobile GIS, and sewage management with novaKANDIS.

**Stand number: G3.106**

#### AKG Software Consulting

AKG Software Consulting (Germany) will introduce VESTRA Civil 3D on Autodesk Civil 3D, a new and complete software solution for transportation planning. Wizard interfaces help accomplish complex design tasks such as junctions, intersections and roundabouts. VESTRA works with the intelligent concept of corresponding elements: updates made in one place being instantly reflected by any related object. The tool by AKG Software Consulting GmbH is part of the product-line VESTRA and over 6,500 installations throughout Europe reflect its quality for road and railway design, sewer design, and surveying.

**Stand number: L3.206**

#### Applanix

Applanix (Canada) is showcasing airborne products, the DSS (Digital Sensor System) and POS AV (Position and Orientation System – Airborne Vehicles).

The DSS is a medium-format, airborne digital camera system, and a mapping-quality alternative to large-format, digital aerial cameras. It is a tool for aerial survey, remote sensing and GIS applications requiring directly georeferenced high-quality, colour and CIR (colour infrared) digital imagery. POS AV is designed for efficient and precise direct georeferencing of airborne sensor data produced using sensors such as aerial cameras, synthetic aperture radar, imaging scanners and Lidar.

**Stand number: D3.211**

#### Argus GeoTech

Argus GeoTech GmbH (Germany) introduces the Argus-Eye, enabling distance measurement turning a corner. It consists of an Orthogonal Mirror and pointing device. The Argus-Eye produces deviation of a ray of sight or laser beam with an angle of 100gon and accuracy of 3 arc seconds. So it is possible to measure hidden points directly and precisely with a [total station](#). An important field of application is architectural surveying. The decisive advantage here is economy of total-station standpoints; visualisation of rectangular and parallel construction axes is eased, with only one construction alignment laser. Combined with a rotating levelling laser, it is also possible to reach hidden areas.

**Stand number: C4.103**

#### Bodemann

Bodemann GmbH (Germany) offers CUS manhole inspection and surveying services with a patented CUS system. The complete measuring system includes a mobile inspection vehicle and the CUS robot. After placing the CUS robot on the manhole, the sensor unit surveys the manhole from top (cover) to bottom (invert). A laser measuring system takes all relevant surveying data, while the integrated CCD colour digital camera, with up to twenty-fold zoom, placed in the sensor unit takes high-resolution pictures and videos of structural condition.

An inspector controls all actions of the robot from the control room. CUS surveys all data with a three-dimensional coordinate system (X, Y location plus local elevation) and guarantees high and consistent quality of surveying and inspection data acquisition. The CUS software records all surveying and inspection data in a database and prepares it for further processing. After completion of a manhole survey and inspection, CUS generates a complete report including all data, a sketch, additional pictures and/or videos.

**Stand number: M3.314**

#### Cadcorp

Cadcorp (UK) will be demonstrating the next version of its Cadcorp SIS, Version 6.2 on the stand of partner GEF-RIS AG. Cadcorp SIS V6.2 includes support for direct read of over 125 GIS, CAD, graphic and database formats (including 50+ export formats) without the need for translation. Coupled with wider support for Open Geospatial Consortium (OGC) services, e.g. OGC Web Coverage Service (WCS), organisations can maximise investment in existing data and enable interoperability across an enterprise. Cadcorp SIS V6.2 also features enhanced enterprise integration, including direct support for the latest spatial database technology, without the need to purchase additional middleware, and improved database transaction and query support. Usability has been improved with numerous enhancements to the user interface, including the ability to find and retrieve OGC services via a Google OGC Web service search wizard. The release offers the value of advanced GIS functionality, such as viewshed and terrain analysis, GPS support and advanced buffering, included at no additional cost.

**Stand number: K3.106**

#### Deutsche Montan Technologie

Following several years in production, Deutsche Montan Technologie (DMT) (Germany) is introducing the successor to GYROMAT 2000. In this new high-precision surveying gyroscope, which measures geographical north with highest accuracy, the internal electronic and software has been completely newly developed. The processor design with Flash-EPROM-Memory now offers a significantly enlarged memory for measurement and control data, and the possibility for future firmware updates. A Bluetooth interface has been implemented for wireless remote control and measurement data transfer to notebooks or pocket PCs. Visualisation of measurement sequence and results has been improved with multi-line Dotmatrix display. The new software includes an interactive measurement sequence with feature for repeating and interrupting single measurement steps. An extensive history function for detailed measurement protocol allows the user to inspect control data after each measurement, thus improving quality management in field applications.

**Stand number: K3.109**

#### DRS Tactical Systems/Walkabout Computers

DRS Tactical Systems/Walkabout Computers (FL, USA) introduces two new products: the XRTe Tablet PC and the RTe Tablet PC. The new Walkabout XRTe Tablet PC has rugged aluminium housing, patented ShutOut sealing technology, QuickBack data recovery system and ProtectIT Automatic Data Protection System. It runs on Intel Centrino Pentium-M technology and has integrated Wi-Fi, Bluetooth, Ethernet, Type III PCMCIA slot and an internal OEM FlexSpace for GPS, GSM/GPRS and long-range Bluetooth. The XRTe is available in

touch or active-pen versions and offers a most comprehensive selection of displays for indoor, indoor/outdoor or outdoor (direct sunlight) viewing. The new Walkabout RTe Tablet PC features durable magnesium housing with patented ShutOut sealing technology and 3.9lb weight. The RTe comes with Intel Celeron Processor-M, integrated Wi-Fi, Bluetooth, Ethernet, Type III PCMCIA slot and an internal OEM FlexSpace for optional GPS, GSM/GPRS and long-range Bluetooth. QuickBack data recovery system and ProtectIT Automatic Data Protection System add to RTe durability and reliability. It is available in touch or active-pen versions. Customers can choose from a comprehensive selection of displays for indoor, indoor/ outdoor or outdoor (direct sunlight) viewing.

**Stand number: C3.114**

#### ESRI

ESRI (Germany) showcases the newly released ArcGIS 9.1, an integrated collection of GIS software products for building a complete GIS. The ArcGIS framework enables deployment of GIS functionality and business logic wherever it is needed: at the desktop, server (including the Web) or mobile device. ArcGIS 9.1 makes a match between graphical user interface and geoprocessing functionality by adding new geoprocessing tools to the ArcGIS Desktop products: 63 tools to ArcView, 86 tools to ArcEditor, and 22 tools to Arc-Info. It is also the main vehicle for release of Network Analyst on the ArcGIS platform.

**Stand number: J3.103**

#### GDF Hannover

GDF Hannover (Germany) supports the conception and change of GIS environment and offers individual support, including software and hardware solutions adapted to the needs of any company. It provides maintenance for customised software and hardware solutions based on free software, with a focus on GRASS, Quantum GIS and UMN Mapserver and including professional training courses and knowledge transfer. GDF Hannover also offers a variety of spatial data analysis services, starting from data preparation, to data analysis (especially remote sensing) and ending with professional visualisations.

**Stand number: M3.118**

#### GEOsat

GEOsat (Germany) presents GEObox smart, small, robust GPS/GPRS equipment specifically designed for vehicles used in agriculture and forestry. GEObox smart allows the user to use an automatic communication platform to identify employees and vehicles with simultaneous recording of position and time. The unit will work self-sufficiently when work begins. By using SD-memory cards, users can display their track-logs offline at the office. Online, the GEO-box smart can deliver positions via low-cost data interface GPRS. Benefits result from its archived data, e.g. engine-running time or documentation of vessels and activities.

**Stand number: A3.122**

#### GfK MACON

GfK MACON (Germany) supplies worldwide digital postcode and administrative maps. The new, updated map set of Europe 2005 is now available, including all countries from Albania to Ukraine. Map Sets for each country include administrative boundaries, postal maps and additional topographic information. All fit seamlessly on top of each other and are completely attributed with names and official description based on geographical coordinates (WGS84).

**Stand number: F3.117**

#### GIStec

GIStec (Germany) showcases the following software products relating to 3D-Geodata-Infrastructure. In3D Database: 3D and Meta Data Management enables multi-user access and storage capabilities. Designed particularly for seamless workflow and visualisation that includes update and notifying processes from legal cadastre databases, it also refurbishes all Levels of Detail (LoD). Among any possible attributes and metadata this database handles DTMs (TIN or Grid, break lines), building models of LoD 1 (block models) to LoD 4 (Landmarks with in-room-ambient). In3D CityModel: a product suite of additional software modules built around ArchiCAD from Graphisoft. These interfaces are built to connect 3D modelling capabilities of ArchiCAD to building shells from photogrammetry and bridges between the ISO data formats IFC (Industry Foundation Classes) and CityGML on GML 3. Omega-Navigator: a product suite offering Virtual Flight new visualisation concepts to 3D-City-Models and Landscape-Models with picture pyramid technology.

**Stand number: D4.112**

#### GITC

GITC (The Netherlands), publisher of GIM International, will launch Geomatics-source.com. Geomatics-source.com is a new global internet catalogue for companies in the professional geomatics market. The catalogue, exploited on a 'yellow pages' principle, will provide addresses and profiles of equipment and software manufacturers, dealers and service providers, as well as detailed equipment and software product fact-sheets. There is no charge for entries and companies can manage their own account online. Visitors will be welcomed to our stand at the Intergeo exhibition, where you will find more information on Geomatics-source.com. Also available will be the various magazines published by GITC.

**Stand number: L3.210**

#### Hochschule Karlsruhe

Hochschule Karlsruhe (Germany) presents two new products. DFHBF (Digitale FEM Höhenbezugsfläche) deals with the computation of height reference surface data bases (DFHBF-DB) for GNSS-heighting. The computation concept and software are open for all observations, from identical points to gravity. DFHBF-DB of Germany and states in Europe, Africa and USA has been computed. DFHBF-DB can be used in all GNSS-equipment and is compatible with RTCM-3.0. www.dfhbf.de GOCA (GNSS/LPS Online Control and Alarm System) uses GNSS/GPS and LPS (total stations) for online deformation analysis in the domains of natural disaster and geotechnics (slopes, volcanoes, dams, mining, etc.).

**Stand number: F4.111**

#### Incite Technologies

Incite Technologies, Inc. (CA, USA) introduces its PolyPro 62mm prism canister. Manufactured in the USA from high impact-resistant poly-materials, the PolyPro canister is virtually indestructible under conditions of normal use. Designed to maintain its strength under extreme temperature and climatic conditions, the product withstands cracking or leaking. With standard M20 thread, the 2040 will fit most prism holders currently in use, including the Incite line of precision-made models.

**Stand number: C3.134**

#### Infotech Enterprises

Infotech Enterprises (UK), a software services company specialising in geospatial, engineering design and IT solutions, will promote the following services. Large-scale data conversion, migration and photogrammetry services using an own onshore and offshore delivery model; in-house capacity of 1.4m person hours per year. GIS software and application development services surrounding ESRI and GE Smallworld technologies (the company is a partner of both companies). Software migration services, including the 'Smallworld Migration Factory' concept to help clients migrate to Smallworld 4.

**Stand number: F3.201**

#### INTERMAK W. W. Haase KG

INTERMAK W.W. Haase KG (Germany) will present a new compact conical cover made of polymer concrete for boundary markers. The new shape of the cover means that material can be saved, thus it is lighter and cheaper than conventional quadratic or conical covers. The shortened conical shape makes it easier to install the cover at ground level. The word 'Grenz-punkt' is integrated in the cover's surface and the cover is available either as a separate article in connection with an interlocking tube system, or tightly connected to the perforated marker.

**Stand number: D3.125**

#### I-SiTE

I-SiTE Pty Ltd (Australia) is exhibiting for the second time at Intergeo. Showcased will be the I-SiTE 4400, a combined laser scanning, survey and digital imaging instrument with capability to simultaneously photograph an entire area measured directly in one 360-degree panoramic sweep, producing a spatially correct 3D photographic model. The I-SiTE 4400 has a motorised, survey telescope built into the instrument for backsighting, with a red laser pointer for underground. Setup, backsight coordinates and instrument height are stored with the scan data, so that the scan is always located within the correct coordinates. I-SiTE's Handheld Controller (HHC) software provides an easy-to-navigate, touch-screen interface for instrument control and scan configuration.

**Stand number: B3.116**

#### iXSea

iXSea (France) provides navigational, positioning and imagery systems for the 'survey world'. Based on its internal Fiber-Optic Gyroscope (FOG) technology, it recently developed inertial navigation and positioning solutions for land and air applications to ensure highly effective imagery and communication systems.

HYDRINS was developed as a dedicated solution for hydrographers. It saves survey time and is suited for multibeam surveys. Developed to meet highly demanding stabilisation and geo-referencing specifications, AIRINS is found onboard Falcon 50 Jets and Super Puma helicopters, interfacing with high-speed cameras. It is an application for aerial cameras, Lidar and SARs.

**Stand number: C3.138**

#### Jena-Optronik

Jena-Optronik (Germany) showcases its new digital aerial scanner JAS 150. The Jena Airborne Scanner JAS 150 and photogrammetric software suite JenaStereo are designed for photogrammetry, mapping and airborne remote sensing, together providing high spatial and radiometric resolution. Based on the space-based proven pushbroom principle, the sensor's construction enables simultaneous acquisition of nine bands of information: five pan-chromatic CCD lines capture photogrammetric and 3D information, while four lines capture data in the red, green, blue and near-infrared band.

**Stand number: F4.117**

#### lat/lon

lat/lon (Germany) announces availability of GISpatcher, offering a platform for complex GIS solutions using Free Software. GISpatcher has a modular structure, is platform-independent and based on the Spatial Data Infrastructure concept and therefore supports OGC standards. The different modules are bundled together into three packages: GISpatcher Web, the base product of the GISpatcher family; GISpatcher Desktop, offering tools for professional creation, analysis and processing of geodata, and GISpatcher Enterprise, an extension of GISpatcher Web and GISpatcher Desktop with security mechanisms.

**Stand number: M3.118**

#### Mettenmeier GmbH

Network Resource Managers (NRM) provides Smallworld GIS users with standard data models and applications. Based on many years of experience developing spatial solutions for the utilities industry, GE Energy and Mettenmeier (Germany) now introduce the NRM product suite worldwide as commercial off-the-shelf applications, leading to easier and cheaper upgrades (Smallworld 4) and maintenance. Smallworld NRM serves as a value creator, giving customers a basis for Smallworld supplementary products such as interfaces with SAP (Netweaver XI), network calculation and analysis, mobile GIS (Smallworld Field), and Web clients (SIAS/XGIS).

**Stand number: L3.202**

#### MVK Holding

MVK (Russia), international exhibition organiser in Russia and CIS countries, will promote GEOFORM+ 2006. This International Industrial Forum will take place at the Sokolniki Culture & Exhibition Centre in Moscow, Russia from 14-17 March 2006. The Forum combines four specialised exhibitions: GeoMap – geodesy, cartography, geoinformational systems, engineering survey and planning, land registry and management; GeoWAY – Intelligent transportation systems and satellite navigation; GeoTech – technologies and equipment for engineering geology and geophysics; and GeoTunnel – technologies and equipment for tunnel construction.

Subjects covered include geodesy, satellite technologies, GPS-technologies, topography, cartography, geoinformation, photogrammetry, navigation and communication, remote sensing, geological survey and prognostication, tunnel building, industrial minerals and recycled products, technologies and equipment for extraction, preparation and recycling industrial materials.

**Stand number: A3.214**

#### OmniSTAR BV

OmniSTAR (The Netherlands) showcases its latest 8400HP GPS receiver. With it customers are able to receive OmniSTAR High Performance (OmniSTAR-HP) service, providing robust, real-time and reliable decimetre-level DGPS solutions for many applications including survey, aviation and agriculture. After start-up this receiver works instantly in DGPS VBS mode and switches to HP once the decimetre accuracy has been reached. Internal batteries last up to ten hours, making the receiver highly suitable for the GIS market. Operation in RTK mode and 32MB internal memory are optional.

**Stand number: C3.217****PENTAX**

This year PENTAX (Japan) emphasises its presence with its new R-300X series. This offers improved performance and a higher specification. Improvements over current models include increased on-board memory, to 20,000 points, 40% reduction in initial measurement time using Quick Mode and prism or reflector sheet, EDM accuracy  $\pm (2+2\text{ppm})$  on all models except R-326EX  $\pm (3+2\text{ppm})$ , incorporation of date clock in all non-prism models in addition to 2" and 3" prism models, and reflectorless measurement capability of 200m with visible dot laser pointer (R-322NX / R-323NX / R325-NX / R-315NX). The series comprises eleven models, giving a choice of 2", 3", 5" and 6" angular accuracy, five non-prism models and six conventional distance-measurement models.

**Stand number: C3.115****RIEGL**

RIEGL (Austria) announces further upgrading to the LMS-Z420i long-range 3D scanner system. The widely used LMS-Z420i scanner is now available with enhanced measurement range of 1,000m, suited for mining applications etc., and with integrated inclination sensors for straightforward and efficient registration of large data projects. The latest release, version 1.2 of the companion operating and processing software RiSCAN PRO, makes complete use of additional sensor data in its backsighting functions. It also provides numerous new functions, e.g. new object view/inspector for data viewing and feature extraction, built-in generation of user-defined animations, or versatile, automatic high-resolution texturing of global meshes.

**Stand number: E3.115****RouteWare**

RouteWare (Denmark) shows the latest version of the routing server product, RW NetServer. New features include client-side native access from C#, Java, PHP, Active-X, SOAP, Delphi etc. The server will run on Windows and Linux. RW NetServer can generate driving directions, carry out travelling-salesman optimisation, et cetera. It works together with popular mapping servers such as ArcIMS, MapXtreme, UMN MapServer etc.

**Stand number: B3.222****SETL**

SETL (China) introduces its new pocket laser marker featuring leather cover, locking device, pitch-up plummeting laser, magnet bracket, tribach-adjusted level line, and out of compensation range laser shutting.

**Stand number: L3.106****Shanghai Jxmec**

Shanghai Jxmec (China) introduces its SP50 Self-levelling laser level with electronic sensor. The SP50 is equipped with accurate three-axis electronic sensor for horizontal and vertical working, and self-calibration function; it can work in rotating, spot, scan and slope-mode. It comes complete with remote control, laser detector, rechargeable batteries and plastic carrying case.

**Stand number: E3.228****Siberian State Academy of Geodesy (SSGA)**

The Siberian State Academy of Geodesy (SSGA) trains specialists for survey, cartography, cadastre, geocology, natural resources exploration, metrology and optoelectronics. It also carries out a large volume of research into geodynamics, photogrammetry, mapping, geographic information systems, engineering survey for construction and engineering complexes operation, and optics. The Academy exhibits its developments in 3D-laser scanning, data support for municipal facility management, ecological monitoring, digital photogrammetric technologies, engineering survey, highway inventory, and automated survey systems for monitoring of engineering structure deformation.

**Stand number: F4.109****SierraSoft**

SierraSoft (Italy) launches the new release of its Geomatics Suite, modular software for surveying and road design. Geomatics Suite 11 adds new features and functions that increase productivity and improve the global level of the software. The new release is the result of more than one hundred improvements in the software. Styles have been introduced for topographic point labels and for longitudinal profile and cross-sections annotations. There are dynamic cross-sections, new features to design road-interchanges, a new way to define the horizontal alignments and a new option that allows export/import of a drawing to/from a current AutoCAD session direct, without the need to create interchanges files.

**Stand number: C3.119****softelec**

softelec (Germany) showcases Version 2 of its VPmap Series software products, available with a number of enhancements. Both products VPmap and VPmap pro provide a set of functions and features for capturing spatial data from scanned maps. VPmap Series V2 now comes with a new option for operation inside Autodesk Map 3D, while choosing to run the programs in 'stand-alone' mode remains standard.

**Stand number: J3.102****Sokkia**

Sokkia Europe (The Netherlands) introduces a whole range of new instruments, software and technologies in this its 85th anniversary year. The Series30RK is a new line-up featuring alphanumeric keyboard, comprehensive software and next-generation Sokkia reflectorless EDM technology, RED-tech II. The Series230RM is the latest motorised total station featuring RED-tech II and will also be shown for the first time during Intergeo. Series030R and 130R will also have onboard Sokkia's 'SFX', Sokkia Field-info Xpress, which enables the user to send and receive survey data via the internet using a mobile phone and Bluetooth wireless technology.

**Stand number: D3.110****South Surveying & Mapping Instrument Co., Ltd.**

South Surveying & Mapping Instrument Co., Ltd. (China) introduces its Total Station NTS-600 series, featuring wide-screen graph display with information Graphic menu. The NTS-660 series is adapted to international-level, high-performance PC systems with 32 bit CPU & 2MB procedural storage memory and 16M data storage memory. The series can automatically eliminate errors and compensate in case of

incomplete level or change of level after long-time working. The series uses absolute encoding, so that previous data is saved in case of incidental power cut. Road software with abundant measurement function is also available in the NTS-600 series.

**Stand number: E4.111**

#### Spot Image

Spot Image (France) promotes two new products. The Expanded Global 3D offer is derived from data acquired by the SPOT 5 High-Resolution Stereoscopic instrument (HRS). This may be purchased as a single layer DEM (SPOT DEM), a more accurate DEM providing quality metadata for each pixel (SPOT DEM Precision), or a global, georeferenced database combining DTED2 DEM and orthoimages, Reference3D. FORMOSAT-2 is a daily revisit capability providing information for change-detection applications and all needs related to surveillance and regular monitoring of sites. Spot Image is the worldwide distributor (with the exception of Taiwan) of FORMOSAT-2 products and services, and now offers products ranging from image packages to installing Ground Receiving Stations.

**Stand number: G3.123**

#### Tianjin Wiseman Optical Instrument

Tianjin Wiseman Optical Instrument Co., Ltd. (China) is a manufacturer specialised in fabricating optical instrument and survey instruments and approved by ISO9001; 2000. The company has a workshop for lens processing and leverages large quantities of lenses on both the domestic market and abroad.

**Stand number: D3.312**

#### TopoSys

TopoSys (Germany) presents three new Airborne Lidar Systems (ALS): the newly developed fibre scanner Falcon III, the integrated polygon scanner Harrier 56 and the integrated polygon scanner Harrier 24. Falcon III (based on Falcon II) now has 300 fibres, and the field-of-view of the Falcon III has been set to 20 degrees (Falcon II: 14 degrees). Achievable point density will be between 4 to 50 points per square metre. The Falcon III is available with integrated four-spectral-line scanner from TopoSys. Other digital camera systems will be integrated up until the end of 2006. Airborne laser scanner Harrier 56 is based on integration of the Riegl LMS-Q560. A version with DSS as the digital camera is also available. In late 2006 a version with the TopoSys four-spectral-channel-line scanner will become available, a highlight of which is full waveform digitisation. Airborne laser scanner Harrier 24 is based on integration of the Riegl LMS-Q240. A version with DSS as the digital camera is available and in late 2006 a version with the TopoSys four-spectral-line scanner will become available. This system features small dimensions and lightness, suiting it for use in small aircraft and UAVs. TopoSys delivers all scanner systems with its own pre and post-processing software: TopPIT (TopoSys Processing an Imaging Tools). TopPIT covers the whole workflow of Lidar data and true-ortho image production, leading to identical dataflow and workflow for all three, sensor systems. The usage of third-party software is also possible.

**Stand number: G3.101**

#### Transoft Solutions

Transoft Solutions (Canada), developers of software for the Transportation community, presents the German version of AutoTURN, software for analysing vehicle turn manoeuvres and swept paths. AutoTURN 5 features improved interface, powerful new analysis tools and enhancements to popular commands, continuing its legacy as timesaving and easy-to-use software. Transoft Solutions have included helpful suggestions from German users in AutoTURN version 5, resulting in a unique tool: Place Offset Simulation, which allows a user to draw a vehicle simulation that maintains constant clearance from a roadway element such as a curb. In essence, the user simply selects an offset distance from the travel-way-edge and the software automatically draws the simulation.

**Stand number: J3.211**

#### Trimble

Trimble (CA, USA) will showcase its newly released products, the S6 Total Station and the TSC2 Controller, a handheld field computer. The Trimble S6 Total Station is a surveying instrument based on a completely new design platform. Cable-free, it includes Trimble MagDrive, SurePoint and MultiTrack technologies, providing improved performance, accuracy and productivity. The TSC2 Controller provides wireless operations in both field and office. Designed for Integrated Surveying solutions using both Global Positioning System (GPS) and optical total stations, the new field computer offers efficiency, flexibility and versatility. Equipped with Microsoft Windows Mobile software for the Pocket PC operating system, the TSC2 controller will run the user's choice of Trimble field software. Specialised Pocket PC applications may also be added to the Microsoft Pocket Messaging (Outlook), Internet Explorer, Word and Excel that come as standard, to increase TSC2 field and office functions in one rugged business device.

**Stand number: D3.202**

#### VITRUVIUS

VITRUVIUS (Germany) introduces VITAS, a program running on a Pocket PC and to be used in a number of survey fields, including internal building survey, elevation survey, archaeological mapping and photogrammetry. VITAS includes many functions to help the surveyor, such as the ability to map to different planes, carry out line intersections, stake out points and export and import dxf files. The new VITAS version 2006 has even more features, including the ability to import and use symbols, add measurements taken by hand or Disto, add text information to objects and support for the new higher-resolution VGA displays available for Pocket PCs.

**Stand number: D3.134**