

Mapping out the future of the Remote Sensing industry

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Workshop 2006

The annual BARSC workshop, titled '*Operational environmental sensing: Future UK policy drivers, technical requirements and capabilities*', will take place on 24th April, 2006 at the DTI Conference Centre, 1 Victoria Street, London (9.30am-4pm)

Remote sensing has a unique and increasing role to play in environmental science and policy making, and is already delivering services in areas such as meteorology and agricultural monitoring. New opportunities are also arising that are led by developments in technology, for instance in the area of geospatial data handling.

This workshop will focus on the requirements of environmental policy makers and agencies for remote sensing data, and the potential role of the remote sensing community in the UK in addressing these requirements.

Attendance at the meeting is free, and includes lunch, but advance registration is essential. For more information or to register, contact workshop@barsc.org.uk, detailing your name, affiliation and contact details.



As Spring 2006 approaches, the downstream remote sensing industry continues to respond to challenging times. A flagship European programme for remote sensing is becoming a reality in the form of GMES. It is now necessary to explore, and identify with greater clarity, what the role of remote sensing industry will be.

As the Space Component of the GMES programme takes shape it is evident that many of the services it enables will be delivered through a variety of new channels, structured in different ways. Some applications fit best within an information 'product'-based philosophy supplied by service providers, whereas for others a data service is more pertinent than an end-product service. Civil government organisations in some countries are aiming to let contracts for services, others have in-house expertise which they may choose to supplement with external support (e.g. for tasks requiring specialist know-how, to gain cost efficiencies for large tasks, or to cope with peaks in demand). The GMES service model (be it for a specific monitoring theme, or overall) is still not clear and will be incremental in its development due to the institutional complexities. What does now seem clear is that within the next five years an operational environment for remote sensing will at last be established, to match the existing operational meteorological satellite services. This new operational environment will offer more effective ways of exploiting medium and high resolution satellite data together with feeds from airborne and ground based sensors.

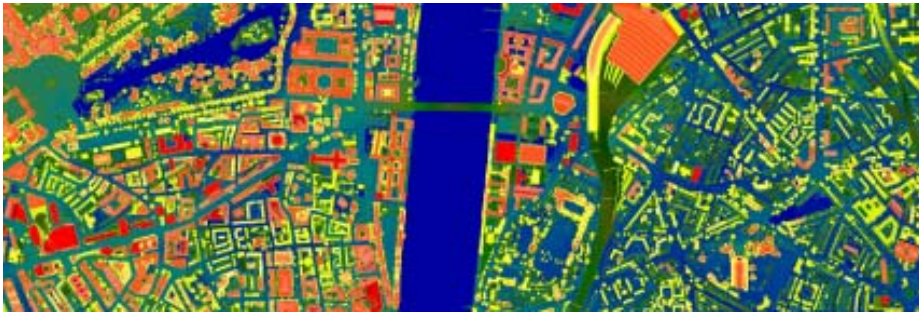
If it is given the opportunity by the public bodies that are funding GMES, the private sector can play a valuable role in keeping the 'official' information channels flowing smoothly and efficiently, it can also develop robust and innovative methods for information delivery. Most importantly, such an approach can enable new commercial services to flourish. A crucial step therefore is for industry and government agencies, at national level as well as international level, to open a fresh dialogue exploring new needs and novel ways of working together. Taking a 'wait and see' approach would be a mistake because the framework for new private and public structures needs to be resourced and planned now.

For this reason BARSC is currently involved in a number of initiatives aimed at defining how its members can best understand and respond to the needs of government agencies for environment and civil security monitoring services. Not least, and most imminent, of these activities is the BARSC Annual Workshop, further details of which can be found in this newsletter. Another relevant activity in which BARSC is participating is eoVox - which includes a re-assessment of how the remote sensing trade associations can best represent their members in Europe.

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Member News

Infoterra completes height data capture of London

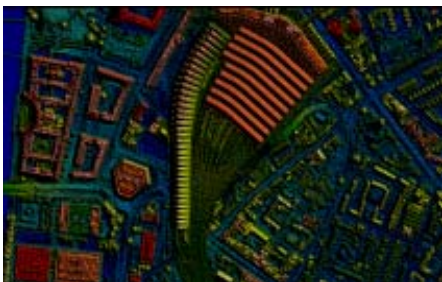


Waterloo Station and the Houses of Parliament

London Heights - 1m horizontal resolution elevation data with a vertical accuracy of +/-15 cm

Infoterra's London Heights data was captured during Summer 2005 so the full extent of vegetation cover has been acquired. "Collecting data during the summer ensures accurate foliage detail is captured which is crucial for environmental programmes, 'line of sight' analysis and subsidence risk assessment," explained Dr. Andy Wells, Marketing Director of Infoterra Ltd.

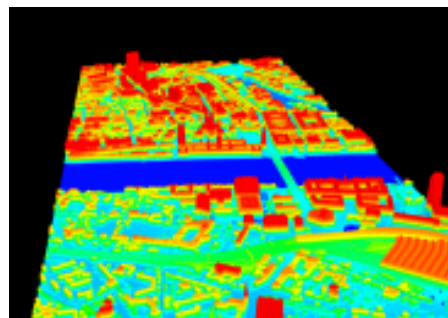
Infoterra captured height information of London using advanced lidar technology (an Optech ALTM2033 sensor) to produce a comprehensive data set at 1m horizontal intervals with a vertical accuracy of +/-15 cm. Acquiring first point and last point enabled the capture of both tree height and the level of the ground beneath the canopy. This information therefore provides both a feature rich digital elevation model (DEM) and base earth digital terrain model (DTM).



Waterloo station

An increasing number of business applications, from civil contingency planning to property management, need highly accurate height data.

Dr. Andy Wells commented, "The data Infoterra has captured is already being actively used throughout a range of applications. Accurate height information, for example, enables the creation of flood assessment maps. This is particularly important as it has already been stated* that a flood of London would cost \$60 billion to clean up".



Perspective view

Lidar is the ideal aerial technology to capture detailed elevation data without having to access the survey area. Lidar data is well established within the surveying world and has been rapidly accepted across markets as a key information dataset.

* Taken from Reuters "Governments should plan more for disasters -report", Wed Oct 19, 2005.

ClearFlite wins Maastricht Award

On February 14, BAE Systems E&IS, National Security Solutions' GPS/GXP* ClearFlite product was officially recognized for its contribution to air traffic safety at the 2006 ATC (Air Traffic Control) Maastricht Awards event in the Netherlands.

ClearFlite is a digital mapping tool developed for the aviation industry to help operators identify and collect vertical obstructions in and around airfields. Available in BAE Systems renowned SOCET SET® software package, ClearFlite uses stereo images along with other SOCET SET functionality to assist operators in defining obstructions more efficiently, with a high degree of accuracy. Developed originally for TERPS criteria, the product has now been extended to support PANS-OPS criteria as well. This functionality was debuted at Maastricht.

BAE Systems developed ClearFlite in response to the National Geospatial-Intelligence Agency's (NGA) Ron Brown Airfield Initiative (RBAI), which was created after a fatal plane crash on April 3, 1996 in Dubrovnik, Croatia, which killed U.S. Secretary of Commerce Ronald Brown and 33 other passengers and crew. The deadly accident was attributed to poor weather conditions, a lack of knowledge of the airfield environment and an off-course approach.

* Geospatial Products and Solutions/ Geospatial eXploitation Products™

BARSC AGM

DTI Conference Centre
1 Victoria Street, London
4pm, 24th April 2006

The AGM will follow the Workshop, and all member companies are invited to attend.



DMCii coordinates international satellites in disaster response

The Emergency on-Call Officer (ECO) at DMC International Imaging (DMCii) in Guildford received an urgent call just as he was leaving the office on the evening of Friday 3rd February.

The International Charter: Space & Major Disasters had been activated by the European Commission Civil Protection Unit to monitor the pollution from the chemical tanker, 'Ece', which sank in the English Channel carrying a cargo of 10,316 tonnes of phosphoric acid and 85 tonnes of diesel.



Over the weekend the Operations team, which normally coordinates the Disaster Monitoring Constellation (DMC) satellites, successfully tasked the appropriate international spacecraft (the Canadian RADARSAT and Indian IRS satellites) to monitor the potential oil spill. With the support of the BNSC, the DMC recently became a member of the International Charter. This was DMCii's first week serving as ECO on the Charter emergency on-call rota.



For more information, see:
www.disasterscharter.org or www.dmcii.com

Joint venture takes a new perspective on countrywide aerial photography



Rachel Eddy, Managing Director of BlueSky International Ltd, and Dave Fox, CEO of Infoterra Ltd shake hands on their joint venture.

BlueSky International Ltd and Infoterra Ltd have signed a multi-million pound deal to jointly create and market new high resolution aerial photography of the country. In a highly significant development for the aerial photography industry, these two key players have agreed to pool their extensive expertise and resources to update and sell UK Perspectives, the countrywide aerial photography database.

The UK Perspectives aerial photography will be updated using state-of-the-art digital technology including a Leica ADS40 sensor; a new generation of digital image capture technology. As well as high-resolution aerial photography, this technology simultaneously captures colour infrared (CIR) imagery and additionally a digital surface model (DSM) and digital terrain model (DTM) will be created. These layers will create a new UK Perspectives product portfolio, revealing much more about

the land below and is expected to become the *de facto* standard.

Infoterra is a major aerial photography contractor for central government and has already begun capturing updates to the UK Perspectives baseline dataset. BlueSky has photographed many counties over the last two years, as part of local authority contracts and through speculative projects. Together, this amounts to over 40,000 square kms of new aerial photography making UK Perspectives the most accurate and up-to-date imagery dataset available.

This new venture allows Infoterra to focus on delivering services to its core central government sector and national organisations, with BlueSky focusing on local government and commercial market sectors. Both parties will work closely to develop advanced and flexible products and services.

Strengthening the voice of the European/Canadian Earth Observation industry

eoVox is an opportunity created by ESA for all companies and other stakeholders to voice their viewpoint on common factors that affect the future of the EO value-adding industry. The results will be looked at carefully by ESA in planning for the period 2008-13 to make sure that the needs of the industry are supported at the right scale, with the right mechanisms, and are of adequate duration.

One particularly important issue for BARSC is to ensure there is an effective relationship between national trade associations and international trade associations.

The **eoVox** consortium comprises LogicaCMG and EARSC (European Association of Remote Sensing Companies), along with consultants from ESYS and ControlWare and value-adding companies



Metria and C-Core. The eoVox team will be undertaking a wide consultation exercise during 2006.

Contact points regarding the initial consultation are as follows:

www.eovox.org

For UK companies:
birgitte.holt.andersen@control-ware.be
General enquiries: eoVox Project Manager:
chetan.pradhan@logicacmg.com

Issues specific to BARSC can also be raised via the
BARSC Chairman: chairman@barsc.org.uk

Intergraph and Ordnance Survey of Great Britain recognized for outstanding photogrammetric implementation

Ordnance Survey of Great Britain working with Intergraph received a prestigious award for excellence in innovation at the Information Management 2005 Awards.

The pair were commended in the Content Management category for its implementation of an Intergraph Z/I Imaging DMC® (Digital Mapping Camera) and TerraShare® image management solution used in the production of Ordnance Survey's MasterMap product.

Intergraph was Ordnance Survey's Premier Partner in the implementation. The company was recognized for its technical

innovation in delivering a digital workflow. This workflow enables imagery captured with a precision digital camera to be processed and stored in an integrated geospatial environment. The solution allows personnel to manage and distribute associated information, such as imagery metadata, flight planning data and ground control information to end users. This capability increases the quality of collected information and enhances efficiency by reducing the amount of time from image acquisition to data extraction.

For more information, contact:
derek.ireson@intergraph.com



British Geological Survey makes large SOCET SET® purchase

The British Geological Survey (BGS), the world's oldest national geological survey, and the UK's premier centre for earth science information and expertise, has recently purchased six SOCET SET licenses. BGS intends to use the SOCET for ArcGIS® module of the photogrammetric software package to enhance the mapping process by deriving and verifying digital geological information from a range of 3D sources such as digital stereoscopic photography.

The SOCET for ArcGIS module allows the ArcGIS community to exploit stereo imagery for the collection and editing of features, and the input of attributes, all in the user's familiar ArcMap® environment. SOCET for ArcGIS uses the rigorous photogrammetry of SOCET SET in conjunction with the ESRI ArcMap application. Operators can follow their ordinary GIS workflows in a familiar environment while collecting accurate geospatial data in stereo.

DMCii wins contract to map Cameroon forests

DMC International Imaging Ltd. (DMCii) has completed imaging of Cameroon for a European project working on deforestation. There is a strong interest in monitoring illegal logging and the 600km wide DMC data is effective for surveying large areas very quickly at high resolution. The coordinated constellation of DMC satellites acquired several repeat images to overcome the problems of cloud, covering the whole of Cameroon in January. The DMCii archive also contains data covering other forest areas, including the whole Amazon Basin.

