

Spatial Data Infrastructure – Asia and the Pacific (SDI-AP) is a free electronic newsletter from the [Global Spatial Data Infrastructure Association \(GSDI\)](#) and is available in both English and Chinese language versions. The newsletter is produced for people interested in Spatial Data Infrastructure, GIS, remote sensing, and geospatial data issues in Asia and the Pacific. It aims to raise awareness and provide useful information to strengthen SDI initiatives and support the synchronisation of activities across the region. Support for the newsletter is also provided by the [Permanent Committee on Geographic Information for Asia and the Pacific \(PCGIAP\)](#), a regional forum to enhance cooperation in the development of a regional geographic information infrastructure. The newsletter is currently being produced for GSDI by the [Centre for Spatial Data Infrastructures and Land Administration](#) at the University of Melbourne.



To subscribe to SDI-AP use [this link](#). Back issues of the newsletter are at the [GSDI website](#). You can also sign up for [GSDI News List](#) to receive alerts of special news and announcements as well as notification of new issues of the SDI-AP newsletter. To subscribe to, and access archives of, thematic or regional discussion lists [please visit](#).

Contents

Message from the editor	1
Contributions	2
International Geospatial Society Information.....	2
SDI News, Links, Papers, Presentations.....	2
SDI Spotlight.....	5
GIS Tools, Software, Data	6
News from abroad	8
Articles	11
Books and Journals	14
Just for Fun !.....	15
Training Opportunities	16
Funding Opportunities, Awards, Grants	18
Employment Opportunities	19
Conference Proceedings	19
Conferences, Events	20

Message from the editor

Welcome to the December edition of the newsletter. This is the last issue for the year and the editors wish our subscribers compliments for the festive season. In this edition the SDI Spotlight feature is by PhD candidate Hamad Olfat of the University of Melbourne's [Centre for Spatial Data Infrastructures and Land Administration](#).

We have introduced a new section "Conference Proceedings" to cover news items reporting back on recent conferences. The new section is located immediately prior to the "Conferences, Events" section.

Of further interest to our readers is the last chance to become a founding member of the [International Geospatial Society](#) (the individual membership arm of the GSDI Association) which has only recently been formed and is seeking individual members.

If you have news or information related to SDI, GIS, RS or spatial data that you would like to share with the community (e.g. workshop announcements, publications, reports, websites of interest etc.), [kindly send us the materials by the 25th of the each month](#) for your contribution to be included in the next newsletter.

[Back to contents](#)

Malcolm Park and Serryn Eagleson ([Editors](#)), at the [Centre for Spatial Data Infrastructures and Land Administration](#), The University of Melbourne.

Contributions

Thank you to the following people and organisations for their contributions to this issue: Paul Box, Kate Lance, and Baek Wonkug for news feeds, Jeremy Shen & Jeremy Huang for the Chinese translation, and Shivani Lal, *GIS Development, Asia Surveying Mapping Magazine* for directly feeding into the newsletter. Also to Hamad Olfat for contributing this month's SDI Spotlight feature.

[Back to contents](#)

International Geospatial Society Information

The [International Geospatial Society](#) is the individual membership arm of the GSDI Association and seeks individuals for membership that have geospatial, SDI, GIS or related professional or specialist interests. The Society intends to engage and enhance communications globally among individuals that are actively involved in promoting, developing, or advancing spatial data infrastructure and related concepts.

The Society is in the formative stage but there are significant benefits to be gained by joining early.

Note the discounted fee for students (US\$ 25).

[Back to contents](#)

SDI News, Links, Papers, Presentations

[India National Spatial Data Infrastructure Portal](#)

Launched on 27 November 2009, The India National Spatial Data Infrastructure (NSDI) Portal provides access to information on spatial data that has been developed by several government agencies in India. Users can take the traditional approach to searching for spatial data based on map sheet (or topo sheet, similar to the quad sheets in the USA), or they can search for spatial data using more generic search criteria such as spatial extent keywords. The portal also provides quick access to information on spatial data via Web pages with metadata provided by participating agencies.

Visit [India's NSDI website](#).

Source: [GIS in Education](#)

[Hydrology Interoperability Experiment \(HDWG_IE1\)](#)

The Open Geospatial Consortium (OGC) will launch a [Hydrology Interoperability Experiment \(HDWG_IE1\)](#) on December 8, 2009. The initiators of the experiment seek participation by other organizations interested in developing standard ways of discovering, sharing and interpreting groundwater data using OGC Web Services (OWS) interface and encoding standards.

This interoperability experiment will advance the development of WaterML 2.0 and test its use with various OWS standards, including the OGC Sensor Observation Service (SOS), Web Map Service (WMS), Web Feature Service (WFS), and Catalog Service Web (CSW) Interface Standards. The experiment will also investigate the interaction of WaterML 2.0 with GroundwaterML (GWML) in scenarios involving the sharing of groundwater data between the USA and Canada.

Source: Baek Wonkug

[Kerala takes lead in setting up a State Spatial Data Infrastructure](#)

Kerala Government has taken the lead to create, maintain and deliver geospatial data and metadata for their external clients, in real time. It has announced setting up of a Spatial Data Infrastructure called Kerala State Spatial Data Infrastructure (KSSDI) and the State Government has already approved Rs. 937 lakhs for the project. The objective of the SSDI is to provide a basis for spatial data discovery, evaluation and application for

[Back to contents](#)

users and providers within all levels of government, the commercial sector, the non-profit sector, academia and by citizens in general. Additional information is available from the following links: [Tender document](#), [Government Order](#)

Source: [India PR Wire](#) and additional [links](#) from Kate Lance and [GIS News](#)

Maslow's Theory and Spatial Data Infrastructure

This article asks the reader to think carefully about the proposal put forward in [paper](#) 'Enabling Sustainability: Hierarchical Need-Based Framework for Promoting Sustainable Data Infrastructure in Developing Countries' by David O. Yawson, Frederick A. Armah and Alex N.M. Pappoe which proposes that that spatial data infrastructure (SDI) can be brought about through the realisation of higher needs —Masow's theory."

Source: [Vector One](#)

ESRI Question and Answer

Q: Is the vision of a spatial data infrastructure (SDI) practical?

Yes, we believe so. The common interpretation of this vision involves the creation of a common and shared library of geospatial services. These services are created from multiple layers of geographic data that are managed and maintained by different mission agencies. The concept is that these layers are served as geospatial services for use by various applications across organizations and for citizen access.

Refer to the source for the full answer to the question.

Source: [ESRI](#)

The U.S. Federal Geographic Data Committee (FGDC) has published its 2009 Annual Report

The Annual Report includes highlights of 2009 and goals for 2010. Among several appendices is the status of the National Spatial Data Infrastructure (NSDI) Framework Data Themes. The document is available as both a web page and a PDF document.

For more information, see the [FGDC website](#).

Source: Wonkug Baek

[New plane allows mapping of uncharted waters](#)

A new aircraft is expected to improve the Navy's ability to map uncharted waters of the Great Barrier Reef and Torres Strait in far north Queensland.

The Dash-eight aircraft based in Cairns will carry new laser depth-sounding equipment.

Lieutenant Commander Richard Cullen says the aircraft will also be able to operate under cloud cover which had prevented a retired Fokker Friendship from operating.

Source: [ABC News](#) & V1 Media

[India: NRSC to monitor irrigation projects](#)

With some states not fully utilising the Centrally-funded scheme to create irrigation facilities, Government has decided to assign the National Remote Sensing Center to monitor 50 projects using satellite imagery.

Source: GIS News & [Press Trust of India](#)

[Government eyes private geo-data](#)

Land information minister Maurice Williamson is backing what he calls a "high impact" intervention to deliver improved spatial data for New Zealand users.

Williamson and Land Information NZ (LINZ) chief executive Colin MacDonald promoted openness in geographical data at a recent Wellington conference for the users of ESRI geographical information systems software.

Source: Business Day (NZ) & [Asian Surveying & Mapping](#)

[The Carbon Benefits Project](#)

It is now widely accepted that human-induced rises in levels of green house gases pose a considerable threat to the planet through global warming. The Carbon Benefits Project will develop ways to model and monitor green house gas emissions and the absorption of CO₂ from the atmosphere which result from land use change, thus helping efforts to reduce the impacts of global warming.

The Carbon Benefits Project will provide a standard way for GEF and other sustainable land management projects to measure, monitor and project Carbon benefits. It will provide a credible, comprehensive system for using remote sensing images and global data sets, taking samples and measurements on the ground, compiling and managing and analysing data.

[Back to contents](#)

Source: inLoughborough.com & [V1 Magazine](#)

[Open market for environmental data & services](#)

A new way to access and reuse environmental data from diverse sources has been devised by European researchers. They foresee a future where environmental data and services are offered on the open market. An EU-funded project called Sensors Anywhere (SANY) has created the technical means to allow the free exchange and use of environmental monitoring data regardless of its source.

SANY uses a 'service-oriented' architecture, where applications can be built out of modular services accessed over the internet. One service might obtain some data, another might plot a map, graph or chart, and another might process the data in some way.

It doesn't matter where the data comes from, how it was obtained or what form it is in. The SANY system transforms all data to a standard format set out by the Open Geospatial Consortium (OGS) and can handle all kinds of sensor data, both raw and processed.

To demonstrate the potential of the SANY approach, the project has been running pilots in the monitoring of air, water and land.

[see also the critical comment by [Manu Parulekar](#)]

Source: [GIS News](#) & ICT Results

[Geospatial technologies to predict earthquakes](#)

While delivering a presentation on the geospatial technologies and its trends at a two-day workshop, Dr Shunji Murai, present general secretary of the Asian Association of Remote Sensing (AARS) and former president of the International Society for Photogrammetry and Remote Sensing (ISPRS) stated that the earthquakes can be predicted.

Dr Murai claimed that the Tokachi earthquake of 8 magnitude and Wencham earthquake of similar magnitude could be predicted applying the geospatial technology. The signals of the Wencham earthquake were available four weeks before it had occurred on May 12, 2008.

Source: [GIS News](#) & The Assam Tribune

[Maps depict effect of climate change](#) (Australia)

The Victorian Government has released maps showing the possible effects of sea level rises on vulnerable coastal regions over the next 100 years.

Source: [GIS News](#) & ABC News

[US FGDC Virtual Forum](#)

The U.S. Federal Geographic Data Committee (FGDC) will host the first Forum in a series of planned virtual forums, on December 9, 2009 in order to bring together federal government geospatial executives to engage in discussion about the development of a national place-based policy that addresses economic competitiveness, environmental sustainability, community health access, and safety and security. The August 11, 2009 White House memorandum to department and agency heads -- entitled "Developing Effective Place-Based Policies for the FY 2011 Budget" -- emphasizes the need to leverage place-based policies for better policy planning in a variety of issue areas. This Forum is intended for federal government geospatial executives only; future Forums will be targeted to other stakeholder groups with interests in policy issues.

Source: Wonkug Baek

[PCGIAP's Secretariat to set up in Korea](#)

The National Geographic Information Institute in Korea said that the Secretariat of the Permanent Committee on GIS Infrastructure for Asia and Pacific (PCGIAP) will be set up in Korea. The PCGIAP was organized by the advice of the United Nations to increase cooperation and exchange of information on policies, institutions, technologies and standards related to measurement and geographic information between national mapping organizations of 56 Asia Pacific nations. The member states of the Committee jointly supported relief activities and surveyed crustal movement when the Tsunami hit Indonesia in 2004. With the setting-up of the Secretariat, the National Geographic Information Institute plans to reorganize the Committee to carry out its duty more effectively.

Source: <http://www.korea.net> (thanks to Wonkug Baek)

[Back to contents](#)

SDI Spotlight

This month's "Spotlight" feature is by PhD candidate Hamad Olfat of the University of Melbourne's [Centre for Spatial Data Infrastructures and Land Administration](#).



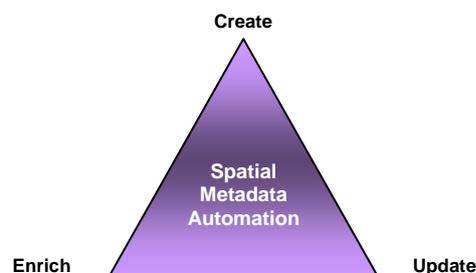
Spatial Metadata Automation

Metadata is commonly defined as "data about data" and plays a critical role in any Spatial Data Infrastructure (SDI) initiative. Metadata not only provides users of spatial data with information about the purpose, quality, actuality and accuracy of spatial datasets, but also performs vital functions that make spatial data interoperable, that is, capable of being shared between systems. Metadata enables both professional and non-professional spatial users to find the most appropriate, applicable and accessible datasets for use.

Regardless of the benefits of metadata, issues and obstacles to the creation and update of geospatial surrogates exist. Spatial metadata which is created and updated manually or semiautomatically, is often considered as a monotonous, time consuming and labour-intensive process by organisations which results in additional overheads and costs. Also, metadata for spatial datasets is often missing or incomplete and is acquired in a variety of different ways. Moreover, metadata is usually created and stored separately to the actual dataset it relates to. This separation of storage creates two independent datasets that must be managed and updated - spatial data and metadata. This can result in inconsistencies and redundancies between the two datasets.

The Spatial Metadata Automation Research Project funded by the Australian Research Council (ARC) Linkage Project aims to develop and demonstrate an approach for extracting, recording, updating and delivering metadata in an automated and integrated fashion. The project is coordinated by the Centre for SDIs and Land Administration (CSDILA) and involves researchers from the CSDILA and industry partners including Department of Primary Industries (DPI) - Victoria, Department of Sustainability and Environment (DSE) - Victoria, Department of Lands - NSW, AUSSOFT Solutions Pty Ltd, CubeWerx Australia Pty Ltd and Logica CMG.

As part of this project a questionnaire has been distributed to organisations managing spatial data, with the aim of the questionnaire being to identify the current processes, issues and problems when creating and updating metadata. The result of this questionnaire will be to provide an in-depth understanding of the research problems in this field. Additionally, a spatial metadata automation framework has been developed consisting of three main streams as illustrated in the figure on the right:



Automatic update: is a process by which properties of a spatial dataset are read from the dataset and written into its spatial metadata. In this stream, a new synchronisation approach based on the relation between *Geography Mark-up Language (GML)* and *ISO 19115 Geographic Information- Metadata* is being investigated. In this approach, GML will be used as a medium to update and transfer metadata content of a spatial data.

Automatic enrichment: this involves improving the content of spatial metadata through monitoring tags that are used by users for finding datasets. This stream aims to investigate a tagging concept that enables implicit contribution of end users to the building of metadata content of spatial data sets. A model of this concept is being design to be implemented within the *Model Information Knowledge Environment (MIKE)* system at DPI, Victoria, Australia.

Automatic creation: When there is no existing metadata associated with spatial data, there is a need for exploring methods to create spatial metadata. This involves *Machine Learning and Data Mining* technologies, however; it has a close association to the Automatic update stream.

For more information about this research project such as publications, events, resources, etc. please visit the link below: <http://csdila.unimelb.edu.au/projects/metauto/>.

[Back to contents](#)

The editors are actively soliciting contributions to the monthly “SDI Spotlight” feature for the January and subsequent issues.

GIS Tools, Software, Data

[Australian Arts on the Map](#)

The Australia Council supports the work of Australian artists - across the country and around the world! Explore the currently funded companies on a Google Earth Map. Search the database by art forms and start to create your own flying tours. View the stories and updates published by the companies themselves, or link to their websites to find out more about what's going on!

Source: Australia Council

[SE Asian Centre on GNSS](#)

The Galileo Space Advisory Council has asked the Asian Institute of Technology in Bangkok to prepare a sustainability strategy for the Southeast Asia Centre on GNSS to take the centre forward over the next five years.

Source: [Asian Surveying & Mapping](#)

[Contours to help in \(Indian City\) flood mitigation](#)

The Anna University is preparing the first-ever contour map of the city of Chennai, India which will determine the run-off pattern of water during the monsoon and help the authorities take mitigatory measures.

The University's Institute of remote sensing is preparing a digital elevation model of the city with the help of Airborne Laser Terrain Mapper (ALTM), which is a high-accuracy laser rangefinder that scans the terrain from a flying helicopter.

Source: GIS News

[Protecting Cambodian Forests](#)

Kevin Davies from the University of Sydney in Australia has led a World Action project to measure the extent of forest degradation in the foot hills surrounding Siam Reap in Cambodia

Source: Asian Surveying & Mapping

[Aerial Maps for Everyone](#)

There is currently significant discussion, if less action, on a proposal to set up an open aerial map of the world, in a similar vein to the highly successful OpenStreetMap.

The idea for [OpenAerialMap](#) seems to have started with Christopher Schmidt in 2007, but then to have foundered on a host of technical difficulties, not least, how to catalogue archive and serve the huge amount of data expected

Source: [Asian Surveying & Mapping](#)

[Tracking Endemic Animals in Taiwan](#)

The Endemic Species Research Institute in Taipei intends to develop a Biodiversity Geographic Information System. It will consist of an internet portal driven by a GIS. The developers say it will offer users a more convenient query interface, and better data management and survey tools.

Source: Asian Surveying & Mapping

[South Korea Gov't to Develop U-City as New Growth Engine](#)

The Ministry of Land, Transport and Maritime Affairs says it will use 490 billion won to lay the foundation for a five-year plan to build a ubiquitous city. The ministry said Tuesday that it plans to develop key related technologies, including new short-distance communication technologies, as part of the establishment of a comprehensive U-city management center by 2013. Established using cutting-edge technology and information technology, the envisioned U-city would embody effective city management while providing citizens access to all forms of information at any time, in any place.

Source: Wonkug Baek

[Back to contents](#)

[GEC \(India\) launches Gujarat's first GIS-based website](#)

An apex body working under the Forest and Environment Department, Government of Gujarat (India), the [Gujarat Ecology Commission \(GEC\)](#) launched its website. The commission's website is the first in the state of Gujarat to be developed based on GIS.

"It is for the first time in the state that a website has been developed based on GIS. The website will be offering database on environmental conditions in the state of Gujarat. While currently the information dates back to 2004, we are in the process of updating it continually", said SK Nanda, principal secretary, forest and environment.

The commission is engaged in various environmental conservation programmes along with strengthen of village level organisations. Nanda added that in order to create environmental data base commission had developed more than 300 GIS based maps on various parameters of environment along with more than 2000 tables. The main features of the website include, up to date information on mangrove plantations and mangrove cover in Gujarat, and information on integrated coastal zone management programme funded by World Bank and to be implemented by commission, among other things. Moreover, under its Environmental Information System (ENVIS) project, information on various environmental factors such as land, water, forests, agriculture, animal husbandry, health mines and mineral, coastal environment and energy has been uploaded.

Source: Kate Lance

[Geomatica 10.3 released](#)

Geomatica 10.3, the latest version of its image-centric desktop software, which now includes imaging tools for GIS, is now available, announced PCI Geomatics.

Source: PCI Geomatics [press release](#) & GIS News

[New Taiwan electronic map service](#)

SuperGeo has released the new Taiwan electronic map service in SuperGIS Online

Source: SuperGeoTek [press release](#) & GIS News

[Assam \(India\) police officers to get GIS training](#)

A group of officers of Assam police are going to United States to receive training in operating GIS and GPS installation which is under way at the city police control room.

Source: GIS News & [The Hindu.com](#)

[Ipernica to launch mapping portal like Google for Australian cities](#)

Perth based Ipernica is poised to launch a new media company based around high resolution digitised terrain maps that it says will compete with Google Maps and with Microsoft Bing.

The service will be delivered by Ipernica subsidiary NearMap using aerial mapping technology developed by NearMap.

Unlike Google, which uses satellite imagery, NearMap's imagery is generated from aircraft mounted cameras. It provides both a top down view and oblique views from all four cardinal compass points and a digital terrain map (heights of individual points).

A **key advantage** is claimed to be **the currency and frequency of updates** - NearMap has been flying Australia's five largest cities monthly and says this **regular updating** will enable users to see changes over time, such as the construction of new roads, and erosion of coastal zones.

Source: GIS News & [Ipernica press release](#)

[China expected to complete world's first land cover map of Antarctica](#) Chinese scientists from the country's 26th Antarctic expedition are expected to complete the world's first land cover map of the Antarctica at the end of this year.

It will be the most accurate map of the continent, presenting various land features, they told Xinhua correspondent aboard Xuelong (Snow Dragon) icebreaker in a recent interview.

The research team will conduct wide range of field spectral collection on the Antarctica to provide data for the map.

The map, with the application of high resolution remote sensing technology, will for the first time in the history show the distribution of key features on the continent, including sea ice, snow, blue ice, rocks, soil marshes, lakes and ice crevasse.

Remote sensing technology is one of the most effective ways of mapping. It has been widely used in China's polar expeditions during the past decade and has made great contributions to Antarctic studies in the fields of mapping, biology research and communication.

[Back to contents](#)

The map is also based on 1,073 remote sensing images acquired from the U.S. satellite Land sat mainly during the austral summer from 1999 to 2002, Cheng Xiao, deputy dean of the College of Global Change and Earth System Science, Beijing Normal University, told Xinhua via email.

"The precision of the map is 15 meters, about 20 times of former Antarctic maps made by other countries," Cheng said. "It will greatly advance our geographic knowledge of the Antarctica."

The map will provide not only more accurate ground parameters for scientists to forecast global change or global warming with climate system models, but also important data for detection on the change of Antarctica land cover in a long run, Cheng said.

Source: China View & [V1 Spatial Sustain](#) & [GIS News](#)

MapBox: A suite of open source tools to create custom maps in Amazon's cloud.

Source: V1 Media

[The essential skills to succeed in a GIS career](#)

What skills do you need to be a successful GIS Analyst? Michalis Avraam put together the results of a discussion at the University of Washington that posed the question, "What are the essential skills to succeed as a GIS Analyst?" Avraam breaks down the critical skills into categories: general GIS, database management, programming, project management and design, and other necessary skills. There is some overlap among the categories and the skills are listed in no particular order. Read more: [The essential skills to success in a GIS Career](#) source : [GiS Lounge](#) & [Michalis Avraam blog](#) (Thanks to Wonkug Baek)

[El Niño Picking Up Steam](#)

El Niño is experiencing a late-fall resurgence. Recent sea-level height data from the NASA/European Ocean Surface Topography Mission/Jason-2 oceanography satellite show that a large-scale, sustained weakening of trade winds in the western and central equatorial Pacific during October has triggered a strong, eastward-moving wave of warm water, known as a Kelvin wave. In the central and eastern equatorial Pacific, this warm wave appears as the large area of higher-than-normal sea surface heights (warmer-than-normal sea surface temperatures) between 170 degrees east and 100 degrees west longitude. A series of similar, weaker events that began in June 2009 initially triggered and has sustained the present El Niño condition. For more information, [click here](#).

Source: [NASA News](#) (Thanks to Wonkug Baek)

[Wiki.GIS.com](#)

Source: [V1 newsletter](#)

[Mapping the Languages of Asia](#)

Source: [V1 newsletter](#)

[Back to contents](#)

News from abroad

"This section has been included to highlight some of the developments happening outside the region which demonstrate SDI in action."

[Online maps to help voters in election process \(USA\)](#)

The State Board of Elections, Virginia is using new tools this year in an attempt to simplify the process of finding valuable election information. Two interactive maps have been added to the Virginia State Board of Elections Website in anticipation of the November General Election

Source: GIS News

[RapidEye's precision farming project](#)

RapidEye has successfully run a Precision Farming pilot project for Agro Risk Euro Scan GmbH (ARES). The product of the project is called "Crop Scan" and supports the German farming community in agricultural planning. ARES acts as RapidEye's service partner for Precision Farming solutions.

From March to September 2009, RapidEye imaged 8,000 hectare multiple times in Germany and provided ARES with up-to-date ground cover maps for different crop types such as wheat, rapeseed, barley, corn and sugar beets each month. The maps helped farmers requesting this product to better plan their agricultural fields

[Back to contents](#)

and crops for the upcoming months.

Customers can receive field-based information including crop identification, crop area determination, crop condition monitoring, and growth stage determination.

Source: GIS News

[RMSI announces completion of largest ever land folio data capture project in Ireland](#)

RMSI, a leading player in the Global Geospatial Services industry today announced the successful completion and delivery of a large scale "Text Data Capture from Image Folios Project" for the Property Registration Authority of Ireland (PRA) that involved the conversion of more than 807,000 individual folios held in scanned image format into a fully digitized format helping the client in having a permanent preservation of all its historical records for the future. The project was one of the most voluminous of its kind that included close to 2.5 million pages, out of which many of the documents were in handwritten format dating back to 1892.

Source: RMSI news release

[Nigerian analogue maps converted digital](#)

Office of the Surveyor-General of the Federation (SGoF) declared that the agency has successfully converted the country's map from analogue form to digital format.

Source: GIS News

[OS data to keep track on workers \(Ordnance Survey – Great Britain\)](#)

Data collected by mapping agency Ordnance Survey is to be used to keep track on vulnerable workers and young children. Locatorz, the firm behind the mobile-phone location service, will be the first commercial company to get its hands on such data.

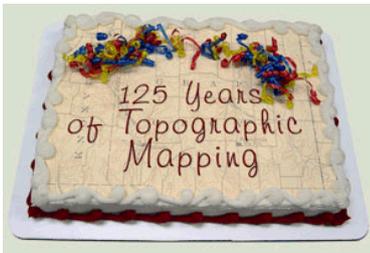
Users will have to have a GPS-enabled handset for the service to work. It can only be activated with the consent of the mobile owner and can locate people to within 10 metres.

Source: [BBC News](#) & GIS News

[BirdLife International monitors Africa's biodiversity](#)

BirdLife International, through its Africa Partnership Secretariat, is utilizing ERDAS IMAGINE to study how remote sensing data can be used to monitor land cover change in African Important Bird Areas (IBA).

Source: GIS News



[USGS 125th Topo Anniversary](#)

The U.S. Geological Survey is celebrating the 125th anniversary of its national program for topographic mapping (1884–2009). Topographic maps became a signature product of the USGS because the public found them—then and now—to be a versatile tool for viewing the Nation's vast landscape. During the 20th century, more than 55,000 large-scale topographic maps were published by the USGS, culminating in complete coverage of the contiguous 48 States in 1991. In the last quarter-century, the rise of the digital age, the rapid growth of Internet communications, and the technology of geographic information

systems (GIS) have transformed topographic mapping science, enabling the electronic construct of The National Map of today. On December 3rd, the USGS will celebrate the 125th anniversary and look to the future of mapping the Nation. For more information, see the [website](#).

Source: Wonkug Baek

[Satellite imagery to study volcanic activity in the African Rift](#)

A team from the University of Miami, University of El Paso and University of Rochester has employed Interferometric Synthetic Aperture Radar (InSAR) images compiled over a decade to study volcanic activity in the African Rift. The study, published in the November issue of *Geology*, studies the section of the rift in Kenya.

Source: GIS News and [InScience.org](#)

[Online Maps: Everyman Offers New Directions](#)

They don't know it, but people who use [Google's](#) online maps may be getting directions from Richard Hintz. Mr. Hintz, a 62-year-old engineer who lives in Berkeley, Calif., has tweaked the locations of more than 200 business listings and points of interest in cities across the state, sliding an on-screen place marker down the block here, moving another one across the street there. Farther afield, he has mapped parts of Cambodia and Laos, where he likes to go on motorcycle trips.

[Back to contents](#)

Mr. Hintz said these acts of geo-volunteerism were motivated in part by self-interest: he wants to know where he's going. But "it has this added attraction that it helps others," he said.

Mr. Hintz is a foot soldier in an army of volunteer cartographers who are logging every detail of neighborhoods near and far into online atlases. From Petaluma to Peshawar, these amateurs are arming themselves with GPS devices and easy-to-use software to create digital maps where none were available before, or fixing mistakes and adding information to existing ones.

Like contributors to [Wikipedia](#) before them, they are democratizing a field that used to be the exclusive domain of professionals and specialists. And the information they gather is becoming increasingly valuable commercially.

Source: NY Times (by reporter MIGUEL HELFT, Published: November 16, 2009)

[Schools mapping out map changes - Technology quickly updates geography](#)

Nine maps hang neatly in Anthony Kudia's classroom at Springman Middle School in Glenview, offering a peek at what the world looked like decades ago.

Students born after the Berlin Wall crumbled can glimpse a divided Germany or see a unified Soviet Union where more than a dozen countries now exist.

But to learn what the world looks like today, Kudia directs his eighth-grade students' attention to a white board that displays up-to-date electronic maps with the tap of his hand.

"I put a black-and-white sheet in front of them and it's, 'Ugh.' I throw this up there and they love it," he said, nodding to a map of Europe projected on the screen.

The new gadgetry increasingly comes at the expense of pull-down paper maps that anchored geography lessons for generations.

Researchers say the shift represents a larger effort to make the subject relevant to students growing up in a technological world.

This month marked [Geography Awareness Week](#), which Congress created to counteract what it described as the "virtual disappearance" of geography from schoolhouses more than two decades ago.

Source: Chicago Tribune

[Swine Flu: What the CDC Map Won't Tell You](#)

According to the [CDC's map of flu activity](#), 46 states are currently reporting widespread H1N1 flu cases. Since almost all states have by now reported outbreaks, this map, which only a month ago was dappled with the different colors of flu levels, is now almost uniformly brown.

Source: ABC News & [V1 Magazine news](#)

[Picking Wine Grapes By Satellite Images in Bordeaux](#)

French wine growers are turning to satellites as a means to determine when to pick the grapes off the vines in the Bordeaux region. As the grapes approach the best harvest time, images begin to show a reddish colour emanating from the vines. The solution is provided by Infoterra France and is based upon images generated by FORMOSAT-2 – a Taiwanese satellite

Source: [Vector 1 blog](#) & CNES (France)

[Geographic awareness needed](#)

Examples of the lack of geographic awareness displayed by politicians, business leaders, and even beauty queens, are legion.

Who can forget presidential candidate John McCain's 2008 gaffe on "Good Morning America" when he referred to the Iraq-Pakistan border (he meant the Afghanistan-Pakistan border, of course). Yet it's likely most Americans following the campaigns would not have known his statement was geographically inaccurate.

In recent months, growing concern over a potential apocalypse in 2012, along with recent tsunamis and earthquakes in the Pacific region, melting Arctic ice and the war in Afghanistan set tongues wagging around the world about the future of our planet. Our ability to address this future is very much linked to geographic awareness, or the lack thereof.

Source: Washington Times & [V1 Media](#)

[GPS tracking device to help Alzheimer patients](#)

The Alzheimer's Association has developed a new program based on GPS. It is a tracking device that is similar to a cell phone and can be worn on a belt or placed in a pocket or a purse. It will pinpoint someone's exact location.

The device is also linked to a pre-programmed "comfort zone" that could be the GPS coordinates for your

[Back to contents](#)

house. If the person wearing the device leaves the "comfort zone," the system alerts that person's caregiver by e-mail or text message.

The Alzheimer's Association says the program could be helpful for families since statistics show that 60% of people with Alzheimer's wander away from home or other locations.

Source: [AAP](#) & [Alzheimers Association](#) & [GIS News](#)

[Netherlands initiates distance-driven tax service](#)

A distance-driven tax service, with the distance calculated by onboard GPS receivers, to replace the annual road tax on cars has been initiated by the Dutch government.

Dutch drivers will pay per kilometer driven, in a move to ease chronic traffic jams and cut carbon emissions. GPS receivers will track the time, hour, and place each car moves and send the data to a billing agency.

Source; GIS News & [Dutch Ministry of Transport, Public Works & Water Management](#)

[Free OS map data to be available online \(United Kingdom\)](#)

Ordnance Survey (OS) map data will be available online free of cost to everybody from 2010. The move will allow people to interpret public statistics about crime, health and education by postcode, local authority or electoral boundary.

Currently, the geographical data is only available free of charge to small scale developers. Opening it up is key to the success of government plans to free its data via data.gov.uk, say the site's creators

Source: GIS News

[USGS director promotes global distribution of earth observation data](#)

Free, easily accessible U.S. satellite data enables any citizen, scientist, or analyst who can use the information to contribute to a shared vision of the challenges facing our planet.

Source: GIS News & [USGS Press Release](#)

See also: [SPOT satellite data of N.A. online](#)

The U.S. Geological Survey (USGS), in partnership with Spot Image Corporation, has begun to distribute, over the Internet, SPOT (Satellite Pour l'Observation de la Terre) satellite data collected over parts of North America (N.A.) between 1986 and 1998.

The USGS is distributing this data at no charge through the USGS Earth Explorer search and order tool. Access is open to any registered user within the U.S., provided he or she agrees to use the SPOT data for non-commercial purposes.

Source: GIS News & [USGS Press Release](#)

[Study Uses Satellite Imagery to Identify Active Magma Systems in East Africa's Rift Valley](#)

A team from the University of Miami, University of El Paso and University of Rochester have employed Interferometric Synthetic Aperture Radar (InSAR) images compiled over a decade to study volcanic activity in the African Rift. The study, published in the November issue of *Geology*, studies the section of the rift in Kenya. "The Kenyan Rift volcanoes are part of a larger Great Rift Valley complex that extends all the way from Mozambique to Djibouti; their presence in East Africa attests to the presence of magma reservoirs within the Earth's crust," said Lead Author Dr. Juliet Biggs, Rosenstiel Postdoctoral Fellow at the University of Miami. "Our study detected signs of activity in only four of the 11 volcanoes in the area -- Suswa, Menengai, Longonot and Paka -- all within the borders of Kenya." Small surface displacements, which are not visible to the naked eye, were captured using InSAR, a sophisticated satellite-based radar technique. For more information, see :

Source: University of Miami *Rosenstiel School of Marine and Atmospheric Science* Press Release (Thanks to Wonkug Baek)

[African Marine Atlas](#)

Source: [V1 Newsletter](#)

[Back to contents](#)

Articles

[Geospatial Data Management, Catalogs, and Spatial Data Infrastructures](#)

This article by Richard Marsden discusses a number of OSGeo options such as MapBender, GeoNetwork OpenSource, and deegree; as well as discussing their role in Spatial Data Infrastructures.

[Back to contents](#)

Source: [GeoWebGuru](#)

[**Modelling Landslide Susceptibility In Parts Of Southeastern Nigeria With Medium Resolution Remotely Sensed Images**](#)

by J. I. Igbokwe, K. U. Orisakwe, J. O. Akinyede, B. Dang and T. Alaga

Landslides occur in different parts of Southeastern Nigeria due to widespread impact of gully erosion resulting from annual rainfall and subsequent flooding. In this area landslides occur mostly as earth movement, rock and debris flows on slopes previously weakened by flood water. Remotely sensed images combined with field observation were used in this study to map potential areas of landslides in south – central parts of Anambra State in Southeastern Nigeria. The study generated landslide zonation map highlighting areas of different degrees of susceptibility and confirmed the possibility of using medium scaled remotely sensed data in landslide susceptibility study.

Source: GIS News

[**Technical Paper on Spatial Data Infrastructure Standards**](#)

by [Dr Melissa Burgess](#)

Integrated Spatial Planning and Communications Specialist

United Nations Development Programme Regional Center Bangkok

Draft October 28 2009 - for circulation and comment

Available here in either [PDF](#), [Google Docs format](#), [HTML](#) or Microsoft [Word](#) format

Alternative links for [PDF](#) or [Word](#) formats.

[**Land Use Mapping using Remote Sensing & GIS Techniques**](#)

by Praveen Kumar Rai & [Dr. Vinay Kumar Rai](#)

Abstract

Remote sensing data provides reliable accurate baseline information for land use mapping. A study was taken up to delineate the land classes in part of the Sonbhadra district (U.P.) and small portion of the Sidhi district (M.P.), comprises the South-Western portion of the eastern U.P. and North-Eastern portion of M.P. and lies between 24o45' N to 24o30' N of latitudes and 82o45' E to 83o0' E of longitude with total area coverage of 700.80 sq. km. using Indian Remote Sensing Satellite (IRS-1C, LISS III, year 1997). A systematic on-the-screen visual image interpretation approach was used to delineate the land use classes using ARC GIS software. The present study was focused on demarcating boundaries of different land use/land cover units from an analysis of different types of colour registrations of land use/land cover units from satellite imagery. Based on visual image interpretation techniques, author divides the study area into forest, Land under cultivation (Cultivated area), Land not suitable for cultivation (Waste Land), Land not available for cultivation classes.

Source: GIS News

[**Landuse Change Analysis of Rutbeek Recreational Area, Netherlands**](#)

by [Md. Rejaur Rahman](#), Asian Disaster Preparedness Center (ADPC), Bangladesh

Abstract

Landuse change is a common issue. Due to population growth and increase the productive activities made the changes. The processes of the landuse changes are slow, for that it is difficult to identify the changes. But Remote Sensing (RS) technology and spectral image made it easier. On this paper the landuse changes of the Rutbeek recreational area identified using RS data and finally ensure the accuracy also done the field check. For this study used Landsat ETM image of 25 May 2001, IKONOS image of 03 April 2000 (both pan and MS bands), ASTER VNIR Image of 12 September 2006 and Topo Map of the area. After the analysis found that the overall classification accuracy is 61.97 percent.

Source: GIS News

[**GNSS + INS - Coupled for accuracy**](#) by [Jason Hamilton](#) & [Rod MacLeod](#), NovAtel Inc

More and more of our physical world is being geo-referenced and the data used for a wide variety of applications by companies, governments and militaries; or offered to the public through sites like Google Maps and Microsoft Virtual Earth. Spatial data has become so readily available that it is now assumed precise and accurate, but how is that accuracy achieved?

Source: GIS News

[**The Berlin Wall 20 Years –Through Geospatial Eyes**](#) by Jeff Thurston

Source: V1 Magazine

[Back to contents](#)

[Spatial Planning and Climate Change Adaption in Coastal Regions: The Case of Vietnam](#)

By Dr. Isaac BOATENG, Senior Lecture, University of Portsmouth, UK (also available in [PDF](#) format)

ABSTRACT

Spatial planning in coastal regions has emerged as a major issue in the 21st century due to the potential impacts of the changing climate and the associated rising sea levels in coastal regions. This paper explores the potential impacts of climate change and the vulnerability of the coast of Vietnam based upon geodetic information and the present coastal development. It then discusses how sustainable spatial planning approaches could be used to reduce vulnerability to climate change and ensure sustainable coastal adaptation of Vietnam's coastal zone. Based on a large-scale flood risk assessment, the study identified that non-structural approach could be used by Vietnam to adapt her low-lying coastline in the North and the South to climate change as this strategy enables vulnerable areas to be occupied for longer before eventual retreat. However, structural adaption policies could be pursued at the central coast which has high elevation and relatively hard geology. The paper revealed that sustainable and successful adaptation to climate change could be achieved if it is perceived as a process similar to spatial planning. It should be planned, implemented well in advance, monitored and evaluated before the occurrence of a natural disaster or an environmental change. Based on this, it recommended that Vietnam should develop and implement coastal adaptation policies now in order to forestalled huge impacts of future climate related disasters. The paper concludes that though coastal adaptation to climate change is a new phenomenon, it does apply key principles of spatial planning concepts and therefore recommended that spatial planning principles should be adopted for the development and implementation of sustainable coastal adaption policies to reduce the impacts of climate change.

Source: FIG

[Landscapes of GIS Knowledge Map](#)

If one is able to determine clusters of knowledge, then the ability to create governance that leads toward development will have greater chance of succes. A 2009 paper entitled 'Constructing Epistemic Landscapes: Methods of GIS-Based Mapping' written by Hans-Dieter Evers, Sven Genschick and Benjamin Schraven describes how this works with several map examples. It can be downloaded in PDF format [here](#).

This principle can apply to many different situations. Conversely, it can be used to learn where knowledge (clustering) of a certain type needs to be enhanced before enabling the change you want.

The concept is fairly practical. If you want to build or develop high speed train routes, for example, then one ought to determine where larger numbers of people having advanced transport knowledge exist. That is different than asking, "who needs to take high speed trains?" It is all about knowing where knowledge is located.

Source: Vector 1 blog

[GNSS receivers - Generation next](#) by [Prof. Chris Rizos](#), University of New South Wales, Sydney, Australia

Source: GIS Development

[Land Use Change Analysis of Kathmandu Metropolitan, Using Remote Sensing and GIS](#)

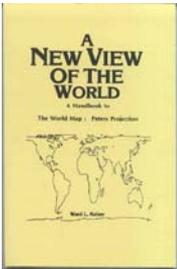
by [Bhagawat Rimal](#), Ph.D Student, University of Wroclaw,

Abstract

This study analyzed the past and present land use change analysis in the city of Kathmandu metropolitan with using a combination of techniques of remote sensing, GIS and Multispectral analysis system. Metropolitan areas have come under intense pressure to respond land use change, due to the high citizen concern of their various activities. In this study Kathmandu is defined as comprising the two contiguous and closely interlinked administrative entities, Kathmandu Metropolitan City and Lalitpur Sub-Metropolitan City. Supervised image classification system were adopted to the satellite imageries date 1976, 1989, 2001 and 2009 to find out the final result of land use change in study area

Source: GIS Development

Books and Journals



[ODT releases desktop Peters Map](#)

A new edition of the Peters Map has been released by ODT. The original Peters Map, introduced in 1974 by Arno Peters, put forth a world-view that featured accurate sizes and proportions of countries. Peters' accompanying text declared his "equal area" map projection to be "the map for our time" which was "fair to all peoples."

Also Available *Handbook to the Peters Projection World Map--3rd edition, 2005*

A 44-page, easy-to-read booklet comparing the Peters map to other projections, explaining the background and message of the Peters map, and answering the most frequently asked questions. Loaded with teaching tips and suggestions for classroom use.

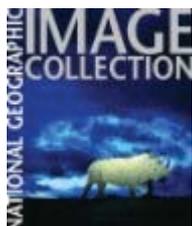
Note: This book is being revised and expanded for the fall of 2010. Any customer buying the current edition can ask for a \$5 credit towards the forthcoming 2010 edition. Keep your order number as a record, and provide it to us when reordering. **Price: \$7.00 Sale Price: \$5.50**

Editors' Note: an [interesting website](#) – well worth a visit with some attractive educational downloads available.

[Spatial Information Theory: 9th International Conference, COSIT 2009 Proceedings](#)

This book constitutes the refereed proceedings of the 9th International Conference on Spatial Information Theory, COSIT 2009 held in Aber Wrac'h, France in September 2009. The 30 revised full papers were carefully reviewed from 70 submissions. They are organized in topical sections on cognitive processing and models for spatial cognition, semantic modeling, spatial reasoning, spatial cognition, spatial knowledge, scene and visibility modeling, spatial modeling, events and processes, and route planning. From Springer, 2009.

[National Geographic Image Collection](#)



editors' note: This possibly also belongs under "Just for Fun!"

Behind National Geographic's worldwide reputation as a powerhouse of photography lies one of the finest, most extensive, and most unique graphic resources on Earth: the National Geographic Image Collection. For the first time ever, readers will plumb the fascinating depths of this immense archive from the earliest photographs collected in the late 19th century to the cutting-edge work of today. Both iconic and never-before-seen images from virtually every corner of the globe, every species of wildlife, and amazing human achievements in exploration, adventure, science and more are showcased and placed in historic, artistic, technical and journalistic context. From Focal Point, 2009.

[Principles of Modeling Uncertainties in Spatial Data and Spatial Analyses](#)

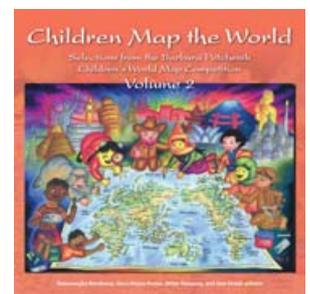
When compared to classical sciences such as math, with roots in prehistory, and physics, with roots in antiquity, geographical information science (GISci) is the new kid on the block. Its theoretical foundations are therefore still developing and data quality and uncertainty modeling for spatial data and spatial analysis is an important branch of that theory. *Principles of Modeling Uncertainties in Spatial Data and Spatial Analyses* outlines the foundational principles and supplies a firm grasp of the disciplines' theoretical underpinnings. From CRC, 2009.

[Abu Dhabi AD-SDI Newsletter \(PDF, 2.5 MB\) Issue 3, Quarter 3, 2009](#)

[Children Map the World, Volume 2](#)

Selections from the Barbara Petchenik Children's World Map Competition

Children Map the World, Volume 2, showcases one hundred favorite world map drawings submitted to the Barbara Petchenik Children's World Map Competition 2005-2007. The map competition, sponsored by The International Cartographic Association, was created as a memorial to Barbara Petchenik, a cartographer who studied how children comprehend maps. The vibrant collection of maps in this volume presents varying perspectives on the theme "Many Nations-One World" from young artists, ranging in age from four to fifteen and representing 37 countries. Cartographers, geographers, educators, and children will take interest in the colorful maps presented in this book. Published by [ESRI Press](#)



[Rethinking Maps: New frontiers in cartographic theory](#)

(Edited by Martin Dodge, Rob Kitchin, & Chris Perkins, Routledge Studies in Urban Geography, 246 pages ISBN: 9780415461528, 2009)

[Back to contents](#)

[Reviewed](#) by Jeff Thurston of V1 Magazine

[The Map as Art: Contemporary Artists Explore Cartography](#) (2009) by Katharine Harmon

This book collects 360 colorful, map-related artistic visions by well-known artists such as Ed Ruscha, Julian Schnabel, Olafur Eliasson, Maira Kalman, William Kentridge, and Vik Muniz and many more less-familiar artists for whom maps are the inspiration for creating art.

[Cartography 2.0](#)

Cartography 2.0 is a free online knowledge base and e-textbook for students and professionals interested in interactive and animated maps.

Source: [V1 Newsletter](#)

[Back to contents](#)

Just for Fun !



[The Box takes off on global journey](#) (Monday, 8 September, 2008)

By Jeremy Hillman, Editor, BBC business and economics centre

The Box is an ambitious and unique year-long project for BBC News to tell the story of international trade and globalisation by tracking a standard shipping container around the world.

It is a project which plans to deliver content for television, radio and online audiences - telling the individual stories behind what makes the global economy tick.

We have painted and branded a BBC container and bolted on a GPS transmitter so you can follow its progress all year round as it criss-crosses the globe. The Box will hopefully reach the US, Asia, the Middle East,

Europe and Africa and when it does BBC correspondents will be there to report on who's producing goods and who's consuming them. (Editors' note: the invention of the standardised container has revolutionized the global transportation of goods.)

UPDATE: The Box is back in the UK, having arrived back in Southampton from Thailand on 22 October.

Source: BBC News (4 November, 2009)

[Giant-Globe -- buy or rent 6- 8- or 10 ft Planets](#)

Activists of all ages have used the Giant EarthBalls to visually demonstrate the importance of honoring the Earth.



These globes are actively used in the environmental and peace movements. Children have 'carried the world' in marches from Seattle to New York City. This powerful gesture is drawing attention from fellow activists, bystanders, and the media. Envision children leading marches in cities around the planet, holding giant spheres aloft by in a heartfelt expression of their desire for a healthy world beyond war. People of all ages relate to these compelling representations of the precious home we all share. This picture is when a GiantEarthBall was used New York City peace rally & anti-war march in February of 2003.

Editors' Note: an [interesting website](#) – well worth a visit with some attractive educational downloads available.

Further to last month's link to [United States Public Broadcasting Service "Patchwork Nation" mapping site](#)

Readers may also wish to check out the US National Public Radio's [interactive maps](#) of the US economy.

Source: [Directions Magazine](#)

[Musings on today's digital communications](#)

From a *GIS Development Weekly* Editorial "Changing Maps and Mapping Change" by Hrishikesh Samant:

The amount of mail (snail mail) I used to get about five years ago has decreased in an exponential manner as against email. I also realised that it is necessary to specify what 'mail' meant, lest it be confused with mail as in email. Today, I consider myself lucky if a letter lands in my pigeon hole! The bright red mail drop boxes at every street corner have all but disappeared, and the stray dogs rarely get to bark at the postman. The news about

[Back to contents](#)

the closure of a number of USPS branches due to a projected 20 billion drop in mail pieces this year, set me on the above chain of thoughts.

(Ed note: "snail mail" is a [retronym](#) used to distinguish the older term "mail" from the newer "email".)

Source: GIS Development Weekly (23 November, 2009)

See also: [Maponics ZIP Code map shows Postal Service branch closings](#) [United States of America]

The latest release of the Maponics suite of ZIP Code map data shows evidence of a record number of ZIP Code changes over the 3 months since the previous data release. This news validates that the U.S. Postal Service has already implemented significant on-the-ground changes related to the massive work force and mail delivery infrastructure re-evaluation it announced earlier this year, a reorganisation initiated to address a projected 20 billion drop in mail pieces from 2008 to 2009.

Source: GIS Development Weekly (23 November, 2009) & [Maponics.com](#)

[Guinness & Google Earth combine to introduce the "Earth that is good for you" or create your own terrain Mappery blog](#)

[mappery](#) is a diverse collection of real life maps contributed by map lovers worldwide. For the first time it allows people to easily find relevant and interesting maps of yet unknown places by visually browsing a larger context. mappery makes it easy to find and explore maps by keyword, location, or simply by browsing a map.

It includes [tourist maps](#), [ski trail maps](#), [college campus maps](#), [national park maps](#), [transportation maps](#), [theme park maps](#), [battlefield maps](#), and many other types.

If you would like to [contact mappery](#).

[Envisat image: Earth from Space: Greenland's east coast](#)

The highly indented and ruggedly mountainous coast of eastern Greenland, one of the most isolated habitations in the world, is featured in this Envisat image. Covering more than 2 000 000 sq km, Greenland is the world's largest island.

Source: ESA 'Image of the Week' & [V1 Magazine News](#)

(Ed Note: the [ESA Image archive](#) is well worth a visit)

[Geography: Where Dead Authors and Dusty Books Come to Life](#)

"Why do I need to know this?" How often have you heard that question? Geography is not the first-reach resource for most English Language Arts(ELA) teachers, but I've found the use of geospatial technology quite powerful with my students. As one of my 7th graders said, "Everything's mappable, Mrs. Duke!" How do you teach your students to think? I used geospatial technology cleverly laced among the traditional and required content to bring my ELA class into the 21st Century and get my students thinking!

Source: GIS in Education blog & [GIS Development Weekly](#) (23 November, 2009)

[Thanksgiving Maps](#)

Where does Thanksgiving food comes from? Linda Zellmer, Government Information & Data Services Librarian at Western Illinois University, has created a series of choropleth maps showing production by state of common food items found on the table at Thanksgiving for the years 1997, 2002, and 2007. Produce (such a sweet potato, green bean, and cranberry production) is mapped by number of acres harvested and turkeys are symbolized by number of turkeys per state. Zellmer brings all the items together in her posters entitled "Where Does Thanksgiving Dinner Grow?" Also available are the datasets for 2002 and 2007 in DBF, CSV or Excel format.

Source: GIS Lounge (Thanks to Wonkug Baek)

[Back to contents](#)

Training Opportunities

[Demographic and Health Surveys \(DHS\) course in Kenya](#)

University of Nairobi Enterprises and Services Ltd is offering a professional short course on Demographic and Health Surveys for Health for June 21-25, 2010 in Nairobi, Kenya. The course provides an overview of the DHS surveys and how to use DHS data to improve health programs.

Demographic and Health Surveys (DHS) are nationally-representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition.

Demographic and Health Surveys provide countries with a standardized tool to obtain indicators for the effective

[Back to contents](#)

monitoring of national programs such as those on HIV/AIDS, health and family planning services available in a country.

[Contact: Prof. Mwanthi](#)

Source: Kate Lance

[Workshop for Asian GNSS](#)

Applications to be lodged by December 20

A workshop will be held in Bangkok to discuss the possibility of developing GNSS applications in Asia and the Pacific. The workshop follows discussions at APRSAF-15 which was held in Hanoi in December 2008. The Asia Oceania Regional Workshop on GNSS will be held 25-26 January 2010, just before APRSAF-16. The Asia-Pacific Regional Space Agency Forum (APRSAF) is an association of space agencies in the Asia Pacific region. The [GNSS workshop](#) will be jointly organised by the Satellite Positioning Research and Application Centre of the Japan Aerospace Exploration Agency, and the Geo-Informatics and Space Technology Development Agency in Bangkok. Further details are available from [here](#)

Source: [Asia Surveying and Mapping Magazine](#)

[Master of Spatial Information Science](#) at the [University of Melbourne](#)

The Master of Spatial Information Science is suitable for graduates of any discipline who are seeking an applied area for their theoretical skills or for those who have had some experience in the use of spatial information and want to become spatial practitioners in their field of specialisation.

[Forestry GIS User Group Opens for Membership](#)

ESRI has launched a new user group specifically for its forestry and timberland management customers. The newly formed ESRI Forestry Group (EFG) will build opportunities for foresters to learn about business solutions, network with like-minded professionals, and develop professional growth.

Source: Vector1Media

[UNIGIS MSc now in Australia](#)

The international UNIGIS MSc postgraduate degree is now offered in Australia through the UNIGIS study centre at the University of Canberra, ACT. Students are invited to enrol in a joint programme combining the capacities from the University of Canberra and University of Salzburg, Austria.

This new UNIGIS study centre is led by Prof. George Cho at the Institute of Applied Ecology, University of Canberra. It offers in-service distance education for professionals interested in GIS and Geoinformatics. Courses towards the MSc will be launched with an on-site workshop in later in 2009 and lead students to recognized international academic degrees.

Source: <http://www.unigis.net>

[Trimble Seminars](#)

Trimble will launch a new series of web seminars for people with an interest in GPS and GIS. They will be offered every 4-6 weeks. The schedule for upcoming Webinars includes: an introduction to the new Yuma rugged tablet computer and VRS. Visit the [Trimble website](#) for more information.

Source: [Asian Surveying & Mapping](#)

[Web Map Gallery](#)

[Web Map Gallery](#) | [Contribute Web Map](#)

Web Map Gallery is a resource for readers to see what others geospatial professionals have created. We encourage you to contribute to the gallery so that all may benefit from the breadth of geospatial applications now being used in many industries. Please feel free to use the link "Contribute Web Map" above to add your own Internet-based mapping application with as much information as necessary to explain your contribution.

Source: [Directions Magazine](#)

[GIS software training by ESRI](#)

ESRI now offers access to more than 40 beginning, intermediate, and advanced instructor-led GIS courses through a variety of training alternatives and venues including

- Video-recorded training at all ESRI learning centers in the United States
- Video teleconferencing training at the ESRI learning centers
- Virtual Classroom **online training delivered to students' own workplaces or home computers**

Source: [GIS News](#)

[Back to contents](#)

Funding Opportunities, Awards, Grants

52°North Student Innovation Prize for Geoinformatics 2010

Once again, 52°North will have a competition for the 52°North Student Innovation Prize for Geoinformatics. The aim of this innovation prize is to encourage students to make a contribution to the development and practical realization of innovative concepts in the field of geoinformatics. The winning team has the unique opportunity to further develop its concept together with 52°North students and academic personnel. A stay at the 52°North Initiative in Muenster is intended for this. Prize money of 1,000 Euros per team member and a maximum of 3,000 Euros per team will be awarded. The prize money is to be paid upon successful completion of the entire work.

This call is open to all students of geoinformatics, computer science, business informatics, media informatics and other fields associated with geoinformatics, who have not yet completed a master's degree or diploma in geoinformatics/informatics/computer science. Students are invited to apply, as individuals or in small teams (2 - 3 members). [PDF Flyer available](#)

Deadline for submission of ideas: December 15, 2009. [Contact](#).

Source: Kate Lance

NAVTEQ Global LBS Challenge

The NAVTEQ Global LBS Challenge is focused on driving the development and visibility of innovative location-based solutions (LBS) for wireless devices. The Global LBS Challenge has become the premier event in the wireless industry and a global symbol of LBS innovation and opportunity. From business applications to sports, travel and security, integrating the accuracy and richness of NAVTEQ digital map data facilitates the discovery of the next wave of LBS using dynamic positioning technology.

Winners are chosen by a panel of distinguished judges in each of five regions. Since the launch of the NAVTEQ Global LBS Challenge, over 32% of the finalist companies have gone on to receive venture capital funding or launched commercially-distributed applications, many on major wireless carriers.

Registration for all regions is now open.

Europe-Middle East-Africa (EMEA) registration deadline: October 30, 2009?

Europe-Middle East-Africa (EMEA) solution submission deadline: November 20, 2009?

North American registration deadline: November 20, 2009

North American solution submission deadline: January 8, 2010

India registration deadline: December 11, 2009

India solution submission deadline: January 22, 2010

South America registration deadline: February 12, 2010

South America solution submission deadline: March 12, 2010

Asia-Pacific (APAC) registration deadline: March 5, 2010

Asia-Pacific (APAC) solution submission deadline: April 9, 2010

further information is available from [here](#)

Thanks to Kate Lance & Wonkug Baek for this update on the Challenge:

A new competition offered by the Journal of maps

The Journal of Maps are having a competition to develop the best Google Maps mashup. Use [JoM GeoRSS feed](#) and GoogleMaps API. The contest runs from now until 11:59pm on Thursday, 31 December 2009. Entry is straightforward: just email < googlemap@journalofmaps.com > giving a brief description of the project and a link to the code or project home page. For the winner there is £200 payable via PayPal.

Source: [GIS Lounge](#)

Earn a PhD in Fuxin

Professor Xu Aigong is seeking PhD students to study under him at Liaoning Technical University in Fuxin, China. His subjects of interest include geodesy and geomatics, GNSS, GIS and intelligent transportation systems. Students may be eligible for support under the 2010 Liaoning Provincial Government Scholarship Program. Email [Prof. Xu](#) for details

Karl Kraus Medal - ISPRS Announces New Award

The "Karl Kraus Medal" is a prize to honour the authorship of excellent textbooks in the scientific fields of Photogrammetry, Remote Sensing, and Spatial Information Sciences. The prize is dedicated to the memory of

[Back to contents](#)

Professor Karl Kraus, a passionate teacher and author of a number of textbooks.

The first award will be made at the ISPRS Centenary Celebration in Vienna on 4th July 2010. Article 1 of the Regulations states:

The "Karl Kraus Medal" is awarded to authors of excellent textbooks in the fields of Photogrammetry, Remote Sensing, and Spatial Information Sciences, written in one of the official languages of the ISPRS, and published no more than eight years prior to the commencement of the quadrennial ISPRS Congress at which it is to be presented. On each occasion a maximum of two prizes can be awarded.

The [full regulations](#) are available from the [ISPRS website](#).

Nominations from an Ordinary Member of the ISPRS, or by authors themselves, together with three copies of the nominated textbook, should reach the General Secretary of ISPRS not later than 1st January 2010 at:

CHEN JUN

National Geomatics Centre of China

28, Lianhuachixi Road, Haidian, Beijing 10083

PR CHINA

Tel: +86 10 6388 1906

Fax: +86 10 6388 1905

Email: isprs@nsdi.gov.cn

Email: chenjun_isprs@263.net

The International Society for Photogrammetry and Remote Sensing is a non-governmental organization devoted to the development of international cooperation for the advancement of knowledge, research, development, education and training in the photogrammetry, remote sensing and spatial information sciences. ISPRS also promotes the application of geospatial information to contribute to the well-being of humanity and the sustainability of the environment. The Society operates without any discrimination on grounds of race, religion, nationality, or political philosophy. ISPRS has 186 members representing government, academia and industry in over 90 countries. ISPRS is a member of ICSU, The International Council for Science and of GEO, The Group on Earth Observation, and is an accredited NGO at the United Nations. For further information [see](#)

Source: [Directions Magazine](#)

[Back to contents](#)

Employment Opportunities

Spatial Jobs Online (Australia) Because of tight application closing dates the editors provide these websites for employment seekers to access directly: < <http://www.spatialjobs.com.au/> > and < <http://www.GISjobs.com.au> >

Looking for a GIS - Geomatics Job in Canada?

Here are some links: 1) [Geomatics Canada Job Site](#); 2) [GeographyJobs.ca](#); 3) [GoGeomatics Canada](#); 4) [Geomatics Employment Center](#)

Source: V1 Magazine

[Back to contents](#)

Conference Proceedings

[18th United Nations Regional Cartographic Conference for Asia and the Pacific](#) (Bangkok, 26-29 October 2009)

[Presentations from 23rd Committee on Earth Observation Satellites \(CEOS\) Plenary Meeting](#)

(Phuket, Thailand, November 3-5, 2009)

[Agenda and Presentations](#).

Source: Kate Lance

[Back to contents](#)

[SuperMap User Conference 2009 Proceedings now available](#)

SuperMap has now put the conference proceedings on line.

[Emerging GIS Landscapes in Central Asia](#)

The 3rd successful Central Asia GIS Conference was concluded by conference chairs Akylbek Chymyrov and Josef Strobl from the Austria-Central Asia Centre for GIScience < <http://www.aca-giscience.org> > on August 28 at the University of Construction, Transportation and Architecture in Bishkek, Kyrgyz Republic. The two-day conference program brought together speakers from Central Asian countries with their counterparts from Central Europe, with representatives from Russia, India, Iran, USA and several other countries making this a truly international event.

Participants received a copy of the conference proceedings at registration (jointly published by KSUCTA and Salzburg University's Centre for Geoinformatics), this volume and further information is available from the conference website at www.aca-giscience.org/gisca.

[Map Africa 2009 Conference Report and Proceedings now available](#)

Source: Kate Lance

[7th FIG Regional Conference: Spatial Data Serving People \(Hanoi\)](#)

Presentations from the 7th Regional FIG Conference are now available from the conference website:

<http://www.fig.net/pub/vietnam/>

Source: [FIG](#)

[GEOINT 2009 Symposium Coverage](#)

The United States Geospatial Intelligence Foundation's GEOINT Symposium (Oct 19-22, San Antonio, TX) underwent a major transformation this year. Historically a conference offering a broad suite of geospatial solutions, it now emphasizes satellite imaging and specifically this year, the exploitation of full motion video (FMV). There seemed to be less of a focus on pure GIS technology, but a heavy concentration on remote sensing. Editor in Chief Joe Francica provides a recap of the technology offered by the conference exhibitors. Source and Links [Directions Magazine](#) with a further updated [link](#)

[ESRI Health GIS Conference Update](#)

Redlands, California — October 13, 2009 — Identifying deficiencies in health and human services delivery and achieving better outcomes using geographic information system (GIS) technology were major themes during the 2009 ESRI Health GIS Conference. An update on the outcomes of the conference is available from [here](#).

Source: [Geoconnexion](#)

[From the FOSS4G Conference in Sydney, Australia](#) (from Asian Surveying & Mapping magazine) [In Praise of FOSS](#)

Paul Ramsey lit up the FOSS4G conference in Sydney this morning (21 October) with a rousing talk on the near-term future of free and open source software, especially geo-information software. His argument: there is less difference between free and proprietary software than you think.

[Anzlic to Endorse CC](#)

The peak body in the Australian and New Zealand spatial industry -- Anzlic -- is expected to endorse Creative Commons as the basis of sharing data sets. That's according to a presentation by Warwick Watkins to the FFOSS4G conference, which is being held in Sydney this week.

[Further Coverage](#) and [even more coverage](#) from Directions Magazine blog

[Back to contents](#)

Conferences, Events

For upcoming events of global or major international interest, please visit the [upcoming conference list](#) on the GSDI website.

[FIG 2010 Pre-Congress Program](#)

[Back to contents](#)

Online registration is now open for the FIG surveying congress to be held in Sydney, 11-16 April 2010. A local surveyor, John Brock, has arranged a history seminar on the two days leading up to the congress (9-10 April). Technical tours have also been organised, including a boat trip to historic Fort Denison.

Source: [Asia Surveying and Mapping Magazine](#)

The editors welcome news of conferences & events from the newsletter subscribers

Date	Location	Event
December 2009		
1 – 4 December	Suva, Fiji	Pacific GIS and RS User Conference University of the South Pacific, Suva, Fiji Website
1 – 3 December	Gold Coast, Australia	International Global Navigation Satellite Systems Society's (IGNSS) 2009 symposium and exhibition
1 – 3 December	Moscow, Russia	Scanex 4th International Conference "Earth from Digital Space – the most effective solutions" Email
2 – 4 December	Feria Valencia, Spain	The 5th Edition of the gvSIG Conference organized by the Regional Ministry of Infrastructure and Transport (CIT), will be held at the Feria Valencia Convention and Exhibition Center, and will once again host the eclipseDay. The call for papers for the Fifth Edition of the gvSIG conference is now open. As of today communication proposals can be sent to the email address to be evaluated by the scientific committee as to their inclusion in the conference program. There are two types of communication: paper or poster. Information regarding to regulations on communication presentations can be found in the report's section . See also < http://jornadas.gvsig.org/how-to-collaborate > email to .
4 December	Copenhagen, Denmark	Creating convincing charts, maps and diagrams on climate change – workshop at COP15, December 4, 2009 in Copenhagen
7-9 December	Abu Dhabi National Exhibition Centre	Global Space Technology Forum 2009 High caliber speakers, space enthusiasts and professionals are invited to submit abstracts for consideration by a scientific committee to be presented for oral presentation. A limited number of speaking slots are available, and the submissions will be filtered by the judges who will have the final say on the subject at hand. Papers are required to be relevant to one of the topics nominated for discussion within the conference, and in the English language. To submit your paper, send the document by email .
17 – 18 December	Ahmedabad, India	ISPRS International Workshop on "Impact of Climate Change on Agriculture"
January 2010		
January 6–8	Redlands, California	The first GeoDesign Summit. Geodesign brings geographic information system (GIS) technology into any type of design process such as developing a community project or conducting scientific research. Participants will introduce the first generation of geodesign concepts, technologies, and tools, drawing from the international group's experience in a variety of disciplines.
19-21 January	Epicentre, Gurgaon	MapIndia 2010 The organisers of Map India 2010, the 13th conference and exhibition on geospatial information technology and applications in India, have issued a call for abstracts for the conference. It will be held 19 - 21 January 2010 at Epicentre, Gurgaon. The conference theme is 'Defining a geospatial vision for India'.

[Back to contents](#)

26-29 January	Phuket, Thailand	16th Session of Asia-Pacific Regional Space Agency Forum APRSAF – 16 (2010) APRSAF Secretariat c/o Japan Aerospace Exploration Agency 1-6-5 Marunouchi, Chiyoda-ku, Tokyo 100-8260 Japan APRSAF-16 Leaflet (PDF 190KB) Click here to subscribe/un-subscribe to APRSAF News Mail Email
February 2010		
2-4 February	Torino, Italy	Gi4DM 2010 Call for Papers Organisers of the International Symposium on Geo-information for Disaster Management (Gi4DM 2010) have issued a call for papers related to the conference theme, 'Remote Sensing and Geo-Information for Environmental Emergencies'. Invitation is also open for contributions covering crisis management in any phase.
15-17 February	Kochi, India	Societal Applications in Fisheries and Aquaculture using Remote Sensing (SAFARI) Symposium The SAFARI initiative (Societal Applications in Fisheries and Aquaculture using Remote Sensing) is organising an international symposium on Remote Sensing and Fisheries. The symposium will address a number of themes including Operational Use of Remote Sensing for Fish Harvesting; Ecosystem Indicators to assess Fish Health, Growth and Recruitment; and Implications of Climate Change on Fisheries, amongst others. Abstracts should be submitted electronically no later than October 15, 2009. Limited funds for travel expenses will be available to assist selected participants in their efforts to attend the symposium.
March 2010		
3 – 5 March	Gold Coast, Australia	ESRI Asia Pacific User Conference and OZRI 2010 The theme for the conference is GIS: extending the reach . ESRI Australia clients, ESRI users and distributors from around the Asia Pacific region are invited to share their knowledge and experience by submitting an abstract based on the conference theme. The event incorporates OZRI 2010, ESRI Australia's national client conference.
22 – 24 March "NEW"	Abu Dhabi, UAE	Map Middle East 2010 Contact
23 – 26 March	Kyushu Sangyo University, Fukuoka, Japan	Fifth International Workshop on "Geographical Analysis, Urban Modeling, Spatial Statistics" GEOG-AN-MOD 10 in conjunction with The 2010 International Conference on Computational Science and its Applications (ICCSA 2010) Important dates 10 November, 2009: Deadline for full paper submission 7 December 2009: Notification of acceptance 8 January 2010: Deadline for Camera Ready Papers March 23-26, 2010: ICCSA 2010 Conference For further information or questions , please send an e-mail to: Giuseppe Borruso (University of Trieste, Italy) or Beniamino Murgante (University of Basilicata, Italy)
April 2010		
11-16 April	Sydney, Australia	International Federation of Surveyors (FIG) Congress 2010 Contact email The deadline for submission of abstracts is 22 September 2009. Alternative URL: FIG 2010 Pre-Congress Program Online registration is now open for the FIG surveying congress to be held in Sydney, 11-16 April 2010. A local surveyor, John Brock,

[Back to contents](#)

		has arranged a history seminar on the two days leading up to the congress (9-10 April). Technical tours have also been organised, including a boat trip to historic Fort Denison.
12-13 April	Melbourne, Australia	<p><u>The International Symposium on Coastal Zones and Climate Change (ISCZ)</u> will be held 12-13 April, 2010 at Monash University in Australia. The coastal zone will house 75 per cent of the world population by 2025. However, coastal zones face severe socio-economic and environmental problems, of which rising sea level is just one. The symposium is sponsored by the Asia Pacific Network for Global Change Research.</p> <p>Contact - Registration queries Email: Irene.Thavarajah@adm.monash.edu.au</p> <p>Contact - Further Queries Email: Charlotte.Fisher@sci.monash.edu.au</p>
14-16 April	Zahedan, Iran	<p><u>4th International Congress of the Islamic World Geographers (ICIWG2010)</u></p> <p>Abstract deadline has passed.</p> <p>This congress is a chance for scholars across Iran and the world to exchange ideas and offer solutions in order to address obstacles facing the Islamic world and furthermore achieve sustainable development. Information Technology advances, especially in Information Management as well as new technologies in Geographic Sciences such as Geographic Information System (GIS) and Remote Sensing (RS), are very important to the geography community.</p> <p><u>Contact.</u></p>
25-29 April	Phoenix, Arizona	<p><u>2010 GITA</u></p> <p><u>Email</u></p>
“UPDATED”		
27-28 April	Singapore	<p><u>Spatially Enabled Government Asia – Singapore – 2010</u></p> <p>Spatially Enabled Government Asia will focus on the strategies for data management and data sharing. The conference will draw on local case studies from countries across the Asian region to showcase the different geospatial applications for a variety of governmental purposes viz. health, urban planning, transport, Defence, environment and others.</p>
26-29 April	Sendai, Japan	<p><u>PICES Symposium</u>, an international symposium on Climate Change Effects on Fish and Fisheries: Forecasting Impacts, Assessing Ecosystem Responses, and Evaluating Management Strategies.</p> <p>Abstract submission deadline: November 30, 2009</p> <p>Financial support application deadline: January 15, 2010</p>
28-29 April	Kuala Lumpur, Malaysia	<p><u>The 6th International Remote Sensing and GIS Conference and Exhibition (MRSS 2010)</u> is being organised by the Malaysian Remote Sensing Society (MRSS) and Universiti Putra Malaysia. It is scheduled for 28-29 April, 2010 at PWTC in Kuala Lumpur. MRSS has issued a call for papers for the conference. Abstracts must be submitted by 10 January, 2010.</p> <p>Contact E-mail (Attn: Ms Nuraini Bt Abdul Thalib)</p>
Date to be announced	Taipei	<p><u>ASIA GIS 2010 Conference</u> further details to be announced</p>
May 2010		
26-28 May	Hong Kong i	<p>The <u>14th International Symposium on Spatial Data Handling</u> Organisers are inviting abstracts related to the theme Theory, Modelling and Concepts in Geospatial Information Science. The event will explore topics such as digital cartography, data modelling for social science and interoperability. The deadline for abstracts is</p>

		31 August. Pdf flyer available at International Symposium Announcement
June 2010		
9-11 June "New"	Washington, DC USA	The First International Conference on Computing for Geospatial (Com.GEO 2010) Important Submission Deadlines Full and Short Papers February 19, 2010, Courses Proposal February 19, 2010 Tech Talks Abstract March 22, 2010, Invited Sessions Proposal January 25, 2009 Workshops Proposal January 25, 2009
9-11 June	Nottingham, United Kingdom	The British Cartographic Society Annual Symposium 2010 'Talking With Maps' The closing date for submissions is Friday 8th January 2010. Successful submissions will be notified by no later than Friday 22nd January. Proposed titles and abstracts of no more than 300 words should be submitted to: Mr P Jones , Chair of Programme Committee, Defence Geographic Centre, Hotine 141, Elmwood Avenue, Feltham, Middx, TW13 7AH.
21-24 June	Yogyakarta, Indonesia	9th GISDECO Conference Theme: Applying Remote Sensing and GIS in Disaster Management Abstract deadline: 15 January 2010. The conference aims to encourage the use of geospatial information in disaster and risk management as well as a basis for spatial planning and regional development. Contact: Dr. Richard Sliuzas, ITC For practical matters: Dr. Projo Danoedoro , PUSPICS Faculty of Geography, Gadjah Mada University,
July 2010		
5 – 7 July	Vienna	100 Years ISPRS: Call for Papers Organisers of the ISPRS Commission VII Symposium (5-7 July 2010, Vienna) are inviting papers relating to the theme, 100 Years ISPRS – Advancing Remote Sensing Science. They are particularly seeking contributions that critically review major research areas in remote sensing. The deadline for full-paper review is 28 November 2009. The deadline for abstract-only review is 28 February 2010.
6-9 July	Salzburg, Austria	GI Forum 2010 The organisers of the GI Forum 2010 in Austria have issued a call for papers for the conference, which will be held 6-9 July. The conference theme is spatial assessment and analysis of vulnerability. Workshops will be held prior to the conference on 6 July. email IMPORTANT DATES Full papers for publication in the conference proceedings and oral presentation February 1, 2010 Extended abstracts for discussion session February 1 Extended abstract for poster presentation June 7 Workshop presentation February 19 Registration deadlines Early registration – until May 28, 2010 Online registration – until June 25 On-the-spot registration commences July 6 The GI Forum pass provides access to the AGIT Symposium and AGIT Expo as well.
12 – 16 July	San Diego	30th Annual ESRI User Conference

[Back to contents](#)

		Call for papers & presentations – Abstract deadline closed 6 November ESRI invites users to tell their GIS story by sharing their experiences with GIS and presenting during a moderated session at the 2010 ESRI International User Conference (ESRI UC).
September 2010		
1-3 September	Paris	PCV2010 PCV 2010 will be held in next year. It is an ISPRS selective conference covering all the aspects of computer vision and image analysis dealing with geographic data. PCV focuses on the processing of images and 3D point clouds, acquired from satellites, aircraft or from street level acquisition systems. Important dates: 1 March, 2010: for peer reviewed papers; 1 April: abstracts of non peer-reviewed papers. 31 August is tutorial day. Conference dates are 1-3 September, 2010. Website
October 2010		
18 – 22 October	Singapore	GSDI 12 World Conference – Realising Spatially Enabled Societies In conjunction with the 16th PCGIAP Annual Meeting .

[Back to contents](#)

To subscribe to SDI-AP, please do so [online](#). To contact please [email](#) the editors. [Global Spatial Data Infrastructure Association](#).

Please mention SDI-AP as a source of information in correspondence you may have about items in this issue.

DISCLAIMER: The Editor and Web Host will not be held liable for any errors, mistakes, misprints or incorrect information.

Copyright © 2009. All rights reserved.



[Back to contents](#)