

Spatial Data Infrastructure – Asia and the Pacific (SDI-AP) is a free electronic newsletter from the [Global Spatial Data Infrastructure Association \(GSDI\)](#) which 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 synchronising these 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.



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## Message from the editors

Welcome to the March issue of the newsletter.

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 25<sup>th</sup> of the each month for your contribution to be included in the next newsletter.

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: Baek Wonkug for news feeds, Sean Lin and colleagues for the Chinese translation as well as Shivani Lal, *GIS Development*, *GeoSpatial World* and *Asia Surveying & Mapping* magazine for directly contributing to the newsletter.

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### GSDI News

#### **GSDI 14 Conference Preparations**

Preparations continue for the joint GSDI 14 World Conference and AfricaGIS 2013 Conference scheduled to be held in Addis Ababa, Ethiopia, at the UNECA Conference Center, in early November 2013 in partnership with GSDI Association, EIS-Africa, the International Geospatial Society, and the United Nations Economic Commission for Africa (UNECA).

AfricaGIS is the largest regularly occurring GIS conference in Africa with participants from the whole continent. The GSDI World Conference moves to sites across the globe to offer geospatial specialists from all parts of the world opportunities to better exchange ideas and learn from peers in building spatial data infrastructure. [For past conferences.](#)

The selected theme of the conference is "Spatial Enablement in Support of Economic Development and Poverty Reduction" The pressing needs of African nations, their citizens, and the needs of economically disadvantaged nations generally are a particular emphasis of the conference and include such concerns as:

- sustainable development,
- economic development,
- business intelligence and business geographics,
- disaster prevention, warning, management, response, and recovery,
- alleviation of poverty and crime,
- lessening the digital divide including access to information technologies,
- ensuring food security,
- support of transportation, health and communication systems, and
- facilitating land ownership.

Substantial reduction in registration fees will be available for local participants, members of EIS-Africa and members of the International Geospatial Society who are from low income per capita nations. Substantial reductions in Exhibit and Sponsorship fees will be available for companies and agencies that are members of the GSDI Association.

Consult the [web site](#) as the Call for Papers and details about the program, facilities and sponsorship opportunities become available.

#### **International Geospatial Society (IGS) Free Memberships**

At its recent meeting, the GSDI Board of Directors passed a motion that allows individuals in low and very low income nations to join the International Geospatial Society (IGS) by providing specific information of value to the global community in lieu of annual cash dues. To join, simply add your professional profile to the growing interconnected network of geospatial specialists across the globe. Benefits of membership in IGS are listed at <http://www.igeoss.org/benefits>. For further information, contact [Harlan Onsrud](#), Executive Director, GSDI Association.

#### **Outreach & Membership Committee**

Committee vice-Chair, Roger Longhorn has joined the International Hydrographic Organization (IHO) Marine SDI Working Group (MSDIWG) and attended the Marine SDI Open Forum meeting in Copenhagen (remotely!) and the following two-day workshop of the MSDIWG, hosted by the Danish Hydrographic Service. The MSDIWG, which has existed since 2009, is setting its new workplan for 2013-2014 and is interested in developing a stronger relationship with non-marine SDI development initiatives at national, regional and global levels. Longhorn will explore this with the GSDI Board and Executive Committee at the next opportunity.

The Outreach & Membership Committee also manages the GSDI Group on LinkedIn, which has added seven new members in the past month, for a total of 229 members today. If you are not already a member of this group, please join today – and tell your friends! Visit <http://www.linkedin.com> to join, then find GSDI in the 'Groups' option, to join the group.

#### **Legal & Socioeconomic Committee**

Legal & Socioeconomic Committee member (and former Chair), Dr Gabor Remetey-Fülöpp (HUNAGI) provided the 'Insider View' column in the GIM International magazine for their January issue, relating to the AfriGEOSS initiative.

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### **Technical Committee**

Technical Committee Chair, Eric van Praag, Regional Coordinator, GeoSUR Program of the Latin American Development Bank (CAF), along with USGS, has nominated the GeoSUR Topographic Processing Service (TPS), built with ESRI's AG Server 10.1, for the AAG Stanley Brunn Award for Creativity in Geography. See more news later in this issue.

The Technical Committee is also responsible for updating of the GSDI SDI Cookbook, a wiki maintained at: [http://www.gsdidocs.org/GSDIWiki/index.php/Main\\_Page](http://www.gsdidocs.org/GSDIWiki/index.php/Main_Page).

### **Societal Impacts Committee**

The Societal Impacts Committee administers the GSDI Small Grants Program and handles Capacity Building.

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## **SDI News, Links, Papers, Presentations**

### **US Federal Geographic Data Committee - [Geospatial standardization Updates](#)**

#### **[The challenge of open data](#)**

If Alan Noble had his way, all publicly funded information, including scientific data, would be released under permissive licencing.

Alan, the Engineering Director for Google Australia and New Zealand, challenged the audience at the TERN symposium dinner February 19, speaking about the need to unleash our public information assets.

'If we want to optimise our economic and social assets, the best way to do that is by making it open. After all, the public have paid for it,' he said.

'Oftentimes the barriers aren't technical, they're cultural – a tendency to horde information.'

Thanks to Ross Johnson for this item

#### **[Arab Spatial Development and Food Security Atlas](#)**

The Arab Spatial Development and Food Security Atlas is a "start-up" initiative of the International Food Policy Research Institute (IFPRI) that is supported by the International Fund of Agricultural Development (IFAD) and the Policies, Markets, and Institutions (PIM) Program of the Consultative Group of International Agricultural Research Centers (CGIAR). Arab Spatial welcomes new partners and as an open source and open access database, Arab Spatial will be updated and expanded on a regular basis. The main objective of Arab Spatial is to improve access to quality data and to support decision and policy making for a food-secure Arab world, covering the 22 member countries of the Arab League of Nations from Mauritania and Morocco in the West to Iraq and Oman in the East. Among the special features of Arab Spatial is the focus on the linkages between food security and development and the combination of indicators at the national, subnational, and pixel levels, often available as time-series data. [Contact](#).

#### **[SDI Cookbook update](#)**

The SDI Cookbook, in its wiki version, now has an updated Chapter 10 to reflect the latest slate of standards and popular version numbers. We seek contributing editors for the other Chapters to also bring them up-to-date. About three months prior to the next GSDI Conference we will seek to affix a date and snapshot the Cookbook into a "SDI Cookbook 2013" PDF version. By saving a PDF and giving it a date of publication, it will clarify the reference and citation of the document and provide a time context.

If you are interested in helping update any of the chapters, please contact [Douglas Nebert](#).

#### **[The Carbon Project Deploys Cloud-based Open Data Platform](#)**

The Carbon Project today announced it has deployed a cloud-based open data platform for sharing transportation data between local, regional and state organizations under a project with the Eastern Carolina Council of Governments (ECCOG) that was funded by the National Spatial Data Infrastructure Cooperative Agreements Program (NSDI CAP).

The deployment provides an easy-to-use platform so local data stewards can upload and translate their data on North Carolina streets and roads into a common information model. To date, street data from over 80 counties in North Carolina has been uploaded using the Carbon 'Transformer'.

"The Carbon Transformer allows local government spatial data stewards to maintain their transportation data in

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its native format, to meet their business needs, while also sharing it with State and Federal Agencies who need data in a common format to aggregate contributions from many sources in seamless statewide and national products," says Jeff Harrison, CEO of The Carbon Project.

The NSDI CAP is funded by the United States Geological Survey (USGS) and administered by the Federal Geographic Data Committee (FGDC) to help form partnerships among organizations to implement the components of the NSDI.

The Carbon Transformer is part of The Carbon Project's new cloud-based open data platform, CarbonCloud Plus+. CarbonCloud Plus+ supports a wide variety of mapping information, and enables development of seamless, open data based on standards from regional organizations, states, the FGDC and others.

For more information please [contact](#).

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### SDI Spotlight



This month's "Spotlight" feature is from Farhad Laylavi who is a PhD student and member of the Centre for Spatial Data Infrastructures and Land Administration (CSDILA) within the Department of Infrastructure Engineering at the University of Melbourne. Farhad's research focus is mainly on "Volunteered Geographic Information and Crowd-sourced Geographic Knowledge" and the role of such information in disaster management and emergency response to crisis.



### The Role of Volunteered Geographic Information in Disaster Management

The power of Web 2.0 to harness collective intelligence and turning the web into a kind of global brain have led us to the era of peer knowledge production (O'Reilly, 2007).. The advances in Web 2.0 technologies along with the widespread of location-aware devices, the recent developments in telecommunication technologies, namely the wireless networks and the Internet and the ability of Web-based technologies to discover, share and mash-up geographic data, have permitted remarkable increase of content created by crowds. The Web is now a collaborative environment that has turned users into active providers (Coleman et al., 2009) Especially, the Location Based Social Networks (LBSN) and Web-based mapping services (e.g. Wikimapia, Flickr, Google Earth, OpenStreetMap, Google Earth, Twitter and Facebook) have enabled citizens to significantly create and share large amounts of geo-referenced and location-based data (Longueville and Smith, 2009). In this context, taking the network of human sensors into account by leveraging Web 2.0 and the technology of broadband communication as well as the location-aware devices, can be considered as the significant, timely and low-cost source of Geographic Information (GI), conceptually known as Volunteered Geographic Information (VGI) (Goodchild, 2007).

This phenomenon can provide officials, experts and even individuals with the opportunities to access and explore wide range of geospatial data. It also can be used as an efficient and cost-effective source of spatio-temporal information for many fields of application, especially for time-sensitive situations such as disaster management that real-time or near real-time geospatial data can be of great value. Several studies have cited examples of the use of the social networks in either anthropogenic or natural disasters and the remarkable role of social media in responding to disasters was clearly demonstrated during the series of natural disasters as well as man-made hazards, supporting emergency response activities, such as earthquakes (Rubeis et al., 2009), floods and forest fires (De Longueville et al., 2010), hurricanes (Hughes and Palen, 2009). Moreover, Goodchild and Glennon (2010) discuss a few series of wildfire disasters in Santa Barbara and focus on how a community can indeed contribute effectively in disaster management, though there are yet to be explored risks and data quality concerns.

On the other hand, despite the potential advantages of VGI in disaster management, there are number of issues and challenges in the quality of VGI cited by a number of studies(Flanagin and Metzger, 2008, Goodchild, 2007, Haklay, 2008, Johnson and Sieber, 2012, Kounadi, 2009, Seeger, 2008) that have become a major concern in the effective exploitation of VGI in disaster management. That's why the creation of spatial knowledge [especially for highly sensitive fields of application like disaster and emergency situations] still relies heavily on a handful of domain experts who are responsible for collecting, analysing and disseminating such knowledge in highly controlled and centralized organizational frameworks (Croitoru and Arazy, 2012).

Exploring issues regarding the quality and validity of VGI in emergency situation and disaster management and finding ways to improve its quality should be the major focus and the main concern of any research on VGI.

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Thus this research aims to develop an understanding of VGI to bring its quality issues and existing challenges to light and then will try to offer a method to improve the quality of VGI to make it usable in the context of disaster management as a reliable source of information.

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The editors remind our subscribers and readers that we welcome contributions for the *Spotlight* feature.

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### GIS Tools, Software, Data

#### [Malaysia: determining suitability of project locations with GIS](#)

The Economic Planning Unit of the Prime Minister's Office in Malaysia will be launching a GIS application this year which will help government agencies better identify a suitable location for their projects.

The Director of the National Databank and Innovation Centre, at the Implementation Coordination Unit at the PMO, told FutureGov that location plays a key part to the success of the project and having the ability to assess a project's intended location can help curb wasteful projects.

When ministries apply for funding for new projects they also have to indicate its location so that our economic planning unit can check and verify if the location is suitable for the nature of the project.

The Director cited problems where locations selected turned out to be unsuitable for the project. It is desirable to avoid such instances as such.

Source: FutureGov

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### [Google launches indoor maps feature in Singapore](#)

Google has launched its indoor maps feature in Singapore, making the city state the second country in Asia to have it.

Android phone users will be able to use the online mapping system to help themselves find their way inside shopping malls and large buildings.

Source: Geospatial World and [DNAIndia](#)

### [GPS Educational Poster – How GPS works](#)

Educational poster available for order OR download as PDF. It is aimed at science and math students in middle school and high school, as well as the general public.

Source: GPS.gov



### [Australia: New bathymetry dataset offers easier access](#)

Geoscience Australia has released a new multibeam bathymetry dataset that provides improved understanding about the topography and nature of the seafloor of offshore Australia, an area which for the most part remains poorly mapped.

The 50m Multibeam Dataset of Australia 2012 is a tiled compilation of the entire multibeam dataset held by Geoscience Australia including all data lying within the outer edge of the offshore area of Australia, as well as some data in international waters, as at August 2012.

...

Bathymetry is the measurement or mapping of seafloor topography. One of the most accurate ways of collecting bathymetry data is through the use of multibeam echosounders which are acoustic ship-borne instruments designed to map the ocean floor.

...

The dataset is available to download as individual tiles from the Geoscience Australia website, or the entire 50m Multibeam Dataset of Australia 2012 can be purchased for the cost of transfer from the Geoscience Australia Sales Centre.

Further collaborative work is also being undertaken with the Australian Hydrographic Office to collate a more detailed dataset of available coastal bathymetry data.

### [DARPA's 1.8 Gigapixel Drone Camera Could See You Waving At It From 15,000 Feet](#)

Source: The Atlantic

### [Australia Undertakes a National Study on Local Government Mapping Use and See below](#)

Australia's Surveying and Spatial Sciences Institute (SSSI) has teamed with Esri Australia to conduct a national survey of local government use of Geographic Information Systems (GIS). The study will engage councils across Australia to understand how they are making use of intelligent mapping technology.

Source: Asian Surveying & Mapping

#### **See also - [Australia: 2013 GIS in Local Government Benchmark Study](#)**

The 2013 GIS in Local Government Benchmark Study will fill a lack of industry research into how the technology is being implemented. The industry has been aware that the role of GIS technology in local government is increasing and hopes to quantify both the use and potential in the report. The survey also aims to help local governments gauge where their current GIS technology capacity sits compared to their peers.

Councils that wish to take part in the survey can [register](#).

### [Database to provide tailored geographic data and modeling solutions – OR – Alternative website URL](#)

Have you ever wondered what the total length of all the rivers in Cambodia is? Or, how many people live within 5km of a road in Bangladesh? Or, how about the number of impoverished people in Zambia?

This kind of detailed information is essential for researchers and scientists around the world working in all food production systems.

To support those seeking such geographic and spatial information, the CGIAR Research Program on Aquatic Agricultural Systems and WorldFish will launch an online database portal that will store ecological and socio-economic data, providing up-to-date spatial information and data on all kinds of important factors such as river systems, climate, distributions of fisheries, poverty levels, food security, and nutrition.

Data on ecosystem services in key regions including Bangladesh, Philippines, Solomon Islands, Cambodia and Zambia will also be available through the database in the near future.

The Geographic Information System (GIS) database will provide custom information for scientists and researchers from WorldFish and the CGIAR Research Program on Aquatic Agricultural Systems (AAS), and the

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CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

All software used by the project will be Open Source, and it is hoped that the scripts for populating the database and performing the queries will be written in SQL. The database will be managed under a subversion control system to ensure complete reproducibility.

To contact the helpdesk and request data, advice, maps, specific statistics, climate time-series or help with all forms of spatial modeling, email: [gis-helpdesk@worldfishcenter.org](mailto:gis-helpdesk@worldfishcenter.org).

### [ASEAN introduces pan-government disaster monitoring system](#)

The Association of Southeast Asian Nations (ASEAN) brought together twenty four ASEAN national disaster management officers for a capacity building workshop which aims to equip the country representatives with the necessary skills to effectively use a new pan-government Disaster Monitoring and Response System (DMRS). The system is installed at the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management ([AHA Centre](#)) based in Jakarta, Indonesia. It is a sophisticated disaster monitoring and response system that uses the Pacific Disaster Center's (PDC) Disaster AWARE platform which is widely used by governments in the United States, Latin America and throughout the Asia Pacific region.

According to Ray Shirkhodai, Executive Director of PDC, the system is able to alert disaster managers with near real-time information on natural hazards such as earthquakes, tsunamis, tropical storms as and when they happen.

Source: FutureGov

**On-line Map builder – MangoMap** you can get a free account [here](#).

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## News from abroad

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



### [Esri Map Shows Real-Time Effects of Winter Storm Nemo](#)

Just in time as the winter storm "Nemo" approaches the US Northeast. A new weather map from Esri has been released to help explore live storm reports, precipitation, and weather warnings with geo-tagged social content from Twitter, Flickr, and YouTube. See the real-time effects of the storm via social media posts. Source: AnyGeo blog and ESRI Public Information [map](#)

### [MAPS - Visualizing How Amtrak's Route Network Serves Most of the U.S.](#)

Mike Hicks, a transit blogger in Minneapolis, [plotted](#) boardings and alightings on a simple state map. Using numbers from Amtrak's [State Fact Sheets](#) and a [list of GPS coordinates](#) for Amtrak stations published by Bill Ensinger, Hicks funneled ridership data into circular, geographic containers.

Texas, for example, has three of America's ten largest cities: Dallas, Houston, and San Antonio. But the inexplicable lack of a direct rail connection between Houston and Dallas makes the state look, on Hicks' map, emptier than Missouri. In fact, the nation's second-largest state had only 465,000 riders in 2012. Missouri, meanwhile, had 739,000.

Other states suffer from a similar routing problem. Ohio, though crossed by regional routes on its northern and southern borders, has no train at all connecting the state's major cities. It has one-fifth [PDF](#) the passenger train traffic of neighboring Michigan [PDF](#).

Source: Atlantic "Cities"



### [ARGO Network Senses Ocean Changes](#) - More than 3,600 robots probe the seas down to 2,000 meters

Scientists worldwide have been capturing and analyzing detailed data about the atmosphere for decades. Information about the oceans has been much more spotty, however. Ships have taken readings along many isolated transects, but each effort has occurred at a moment in time, and significant portions of the seas have gone unexamined.

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That is changing. Since 2007 a network of thousands of floating robots covering the seven seas, named Argo, has been generating real-time data for use in ocean and climate research.

Source: Scientific American

### [Did Google Earth Error Send Murderer to Wrong Address?](#)

Moreover, there was another idea that investigators began to pursue at the time. A neighbor of the Koula's, Steve Burgess, freely admitted that he had received death threats. He was the president of a local bank.

And, as the CBS News investigation indicated, if you use Google Earth to locate Burgess' house, you get a surprise. "48 Hours" correspondent Peter Van Sant said: "In fact, when you Google Earth Steve Burgess' address...the zoom into the house goes to the Koula's house, not to Steve Burgess' house."

This story brings to mind the even more recent case of the alleged murder of Rodrigo Diaz [see below]. His friends claim that his GPS had led him to the wrong house.

The owner of that house allegedly became annoyed or threatened by the presence of Diaz and his friends. This resulted in Diaz being shot in what lawyers for the accused, Phillip Sailors, say was a case of self-defense.

Source: Scientific American

### [Man allegedly follows GPS directions to wrong house; shot dead](#)

Friends say a man in his early 20s was picking up one more of their group to go skating, when his GPS took him to the wrong house and the home-owner allegedly shot him dead, later saying he feared a home invasion.

According to friends of Rodrigo Diaz, they were all going ice skating. Diaz was driving the car, and they were going to pick up one more skater. They pulled into a driveway, which their GPS -- at least, according to one of the friends -- told them was their destination.

Source: cnet.com

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## Articles

### [Accurate Spatial Data: GIS and Travel Accounts](#) by Anderson Sandes

Data acquisition is without a doubt one of the most important processes in the implementation of any GIS. As GIS professionals, it is imperative that we have access to and work only with spatial information that is accurate and correct. Not doing so can cause delays, affect the budget of the project, and in some cases even damage the reputation of otherwise respectable companies.

In the age of the Internet, acquiring any information has become easier than ever. GIS professionals can gain access to various spatial datasets from multiple sources just by doing a Google search. For this reason, it is important to question the integrity of the data we are using. I have lost count of how many times I identified GIS datasets containing wrong or inaccurate information. I also have lost count of how many times I chose to build my own GIS datasets to ensure the integrity and quality of my spatial data.

Although GIS is relatively new as a discipline, the challenge of acquiring accurate spatial information has been around for centuries. As early as the beginning of the nineteenth century, it is possible to observe the development of accurate standards in geography with the foundation of national geographic societies, such as the Société de Géographie de Paris, in 1821, and the Royal Geographic Society of London, in 1830. One of the concerns about professional standards that emerged during this period was finding reliable spatial information to be used in cartography.

Why bring the past to a contemporary discussion about the importance of data integrity in a GIS? The answer is simple. GIS professionals and cartographers from the past are connected through the mutual concern of finding and using the most accurate and reliable spatial information. In this article, I explain how being connected to some of the finest travel writers, surveyors, and explorers, enabled a cartographer from the eighteenth century to leave a legacy that has outlived his existence.

Source: GoGeomatics Canada magazine

### [10 Ways to Improve High-Density Cities](#) by KAID BENFIELD

Getting the right city density – generally expressed in the US as people per square mile or homes per acre – to support sustainable and pleasant living is one of the trickiest problems we face as we address the future of our communities. The typically low densities of suburban sprawl built in the last half of the 20th century, despite their popularity at the time with a considerable share of the market, have been shown by a voluminous body of research to



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produce unsustainable rates of driving, carbon emissions, pollution, stormwater runoff, and adverse health impacts.

Source: Atlantic "Cities"

### [The Geometry of Transit-Friendly Neighborhoods](#)

"Transit-oriented development" sounds like a tidy solution to myriad urban ills. If cities enabled more people to live and work within strolling distance of a train or bus stop, families could save money on gas, residents without cars could more easily get to work, neighborhoods could cut down on congestion and pollution, and economic development might ensue. As a general theory, it simply makes sense for cities to invest in the nodes that connect us to each other and the places where we need to go.

That said, every rail stop isn't equally primed for a new apartment complex and a Whole Foods. And it can be hard to finger why. There's little sense, for instance, in pushing transit-oriented development in a community where every household already owns two cars. Nor does it make sense in the center of a neighborhood sliced by highways and mega blocks where residents are unlikely to walk to the train.

The question of where to invest in transit-oriented development is a complicated one. We recently stumbled across a smart way of visualizing the answer – with "typology radar graphs!" – from the Center for Transit-Oriented Development.

Source: Atlantic "Cities"



### [Improving disaster management practices](#) by Dr Srikanth Venkatesan

Major issues, best practices and way forward

Source: Co-ordinates magazine

### [Critical developments in land surveying](#) by Brian J Coutts and Malcolm McCoy

The methodologies of land surveying remained largely unchanged over hundreds, if not thousands, of years. Computational methods were enhanced with the use of logarithmic tables introduced by Napier in the 17th century, and supplemented by hand-powered rotational cylinder mechanisms for speed of calculation first introduced by Pascal, also in the 17th century. These were later to be electrified in the 20th century prior to the invention of the microprocessor, which introduced the electronic age in the 1970s. Advanced engineering allowed graduated circular scales to assist with angular measurement to a greater accuracy especially when in combination with a telescope, and linear measurement was carried out by using a variety of devices, often calibrated to a national standard, but the actual form used for a specific task was dependant on the accuracy required e.g. cloth tapes, steel bands. The invention of flight in the early 20th century allowed for photography to literally add a new dimension to the tools of the land surveyor.

Source: Co-ordinates magazine

### [X-raying Nigeria National Geo-Spatial Data Infrastructure \(NGDI\): the journey so far](#)

Authors: Njike CHIGBU & Joel I. IGBOKWE

[Proceedings of 8th FIG Regional Conference](#) [Surveying towards Sustainable Development], Montevideo, Uruguay, 26-29 November 2012 ,

#### **Summary:**

The development of NGDI in Nigeria has generated a lot of debates in the recent times. This stems particularly with the appointment of NASRDA, the country's space Research and Development Agency as the National clearing house by the National GI policy document. However, some schools of thought are of the view that the Office of the Surveyor General of the Federation (OSGOF), who by law are empowered to coordinate the practice of surveying and mapping (Survey Co-ordination Act No.28 of 1962 as amended in 1968 and 1973) should be responsible for all data custodianship in Nigeria including the implementation of the NGDI policy. The short-comings of the Nigerian GI Draft Policy and Government selective inertia in funding the NGDI project are considered in this work. It is advocated that sincere implementation of NGDI in Nigeria by all stakeholders and necessary corrective measures should be taken for the observed gaps. However, when NGDI is properly implemented in Nigeria, the overall gains of the NGDI will sky rocket Nigeria into a stronger and virile economy by 2020 or 2030.

**Key words:** Capacity Building, Geo-informatics, Survey co-ordination and implementation strategy

[Solutions for open land administration](#) by Alexander Solovov, Andrew McDowell, Elton Manoku, Maria Paola Rizzo, and Neil Pullar

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Its aim is to make computerized cadastre and registration systems based on open source software more affordable and more sustainable in developing countries.

Source: Co-ordinates magazine

#### [Variations in multiscale curvature distribution and signatures of LiDAR DTM errors](#)

by Giulia Sofia, Francesco Pirotti and Paolo Tarolli, *Earth Surface. Processes and Landforms* (2013)

**ABSTRACT:** The development of high resolution LiDAR digital terrain models (DTMs) has enabled the exploration of the statistical signature of morphology on curvature distributions. This work analyzes Minimum Curvature distributions to identify the statistical signature of two types of LiDAR-DTM errors (outliers and striping artifacts) in the derived estimates, rather than morphology itself. The analysis shows the importance of modeling these errors correctly, in relation to the scale of analysis and DTM resolution, in order to have reliable curvature estimates. Nine DTMs of different morphological areas are considered, and grouped into a training dataset (without errors) and a test dataset (with errors). In the training dataset, the original DTMs are considered as true values; errors are then applied to these data. Minimum Curvature is computed at multiple scales from each DTM: changes in curvature distributions due only to morphology and scale are characterized from the original data; error effects are then identified from the datasets with simulated errors, and validated against the test dataset. The analysis shows that outliers and striping artifacts can be realistically simulated by heavily left tailed distributions. For DTMs without errors, the scale-dependent change in curvature distribution is primarily controlled by real morphology. When DTMs include errors, curvature distributions become controlled by these errors, whose propagation depends on error distribution, error spatial correlation, and the scale of analysis. This study shows that the curvature distributions are impacted upon differently by striping artifacts and outliers, and that these are clearly distinguishable from the signal of morphological features: a scale-dependent change in curvature distribution can therefore be interpreted as the signature of these specific errors, rather than morphology.

**KEYWORDS:** curvature; DTM quality; LiDAR; error modeling; geomorphometry

#### [High-resolution topography and anthropogenic feature extraction: testing geomorphometric parameters in floodplains](#)

by Giulia Sofia, Giancarlo Dalla Fontana, and Paolo Tarolli, DOI: 10.1002/hyp.9727 (2013)

**Abstract:** In floodplains, anthropogenic features such as levees or road scarps, control and influence flows. A up-to-date and accurate digital data about these features are deeply needed for irrigation and flood mitigation purposes. Nowadays, LiDAR Digital Terrain Models (DTMs) covering large areas are available for public authorities, and there is a widespread interest in the application of such models for the automatic or semiautomatic recognition of features. The automatic recognition of levees and road scarps from these models can offer a quick and accurate method to improve topographic databases for large-scale applications. In mountainous contexts, geomorphometric indicators derived from DTMs have been proven to be reliable for feasible applications, and the use of statistical operators as thresholds showed a high reliability to identify features. The goal of this research is to test if similar approaches can be feasible also in floodplains. Three different parameters are tested at different scales on LiDAR DTM. The box-plot is applied to identify an objective threshold for feature extraction, and a filtering procedure is proposed to improve the quality of the extractions. This analysis, in line with other works for different environments, underlined 1) how statistical parameters can offer an objective threshold to identify features with varying shapes, size and height; 2) that the effectiveness of topographic parameters to identify anthropogenic features is related to the dimension of the investigated areas. The analysis also showed that the shape of the investigated area has not much influence on the quality of the results. While the effectiveness of residual topography had already been proven, the proposed study underlined how the use of entropy can anyway provide good extractions, with an overall quality comparable to the one offered by residual topography, and with the only limitation that the extracted features are slightly wider than the investigated one.

**Keywords:** LiDAR; anthropogenic feature; floodplains; high resolution topography; DTM; surface morphology

#### [Fast approach cadastral documentation](#) by Alexander Kohli

The logical consequence of economic development—land consumption—substantiates the need for sustainable land management and cadastre

Source: Co-ordinates magazine

## [AlpTransit – The Railway Link of the Future](#) by Joc Triglav

The new rail links through the Alps are integrating Switzerland into the growing European high-speed network. They enable the railways to provide attractive services at the heart of the international passenger and freight transportation system and to bring the economic centres on both sides of the Alps closer together – under the motto «fast, economical, safe». It's impossible to present all of the project on these few pages. Therefore this article only concentrates on some of those aspects that are more interesting from the general geoinformation point of view.

Source: Geolnformatics

## [Geolocation and Time - An Evolution of the Millennial Pair \(Part 1 & Part 2\)](#) by Joc Trivlav

From Anniversaries into the Future This year's 250-th anniversary of the invention of the famous watch H-4 that ultimately resolved the longitude problem and the 400-th anniversary of the first use of an astronomical telescope is also an opportunity to look at geodesy as a science of measuring the Earth's shape as a function of time. The paper gives an insight in some basic developments and describes the historical development of geodesy by pointing out and demonstrating the relations between the Earth's shape, geolocation and time measurements from the ancient times to the present time. [Part 1 \(pdf\)](#) and [Part 2 \(pdf\)](#)

Source: Geolnformatics

## [National Spatial Data Infrastructure in Botswana – An Overview](#) by Maphale, L. and Phalaagae, L.

Advances in Natural Science, Vol. 5, No. 4, 2012, pp. 19-27

[Full Text PDF](#).

### **Abstract**

The spatial data plays a vital role in any developmental activities whether it is natural resource management or socio-economic development. Most land-related government departments in Botswana have over the years since independence in 1966 developed systems to support their principal areas of operations as regards to spatial data. The adequacy and currency of spatial data in government operations improved leading to a need for integrated systems. This has progressively led to issues of building a National Spatial Data Infrastructure (NSDI) and an initiative modeled around Federal Geographic Data Committee (FGDC) has been established. Several facilitative committees were set and several meetings held in attempt to develop the idea to a realizable level and integrate it into the greater workings of the national economy. This noble idea has stalled for some time now and it is the intention of this paper to report on how the idea was initiated in Botswana and look at the probable causes for its stalling. The paper will then go ahead and suggest what could be done to revitalize the idea by relating it to what is considered the best practices in Spatial Data Infrastructure (SDI) programmes globally.

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## Books and Journals (including Videos and Web publications)

### [3D Visualisation World](#) (February 2013 newsletter)

### [Free E-book... Online GIS \(onlinegis.com\)](#)

This free resource comes from Christopher Brown, CEO at MangoMap - an open, cloud-based map publishing solution. Christopher wanted to share with readers a resource that covers off some of the most popular open source webmap solutions - enter Online GIS. In this first e-publication from Chris he looks at several popular, open solutions including ArcGIS Online, CartoDB, CloudGIS, GeoCommons, MangoMap, and MapBox. The resource provides the following about each of these solutions:

**ArcGIS Online:** Comprehensive feature list. Jack of all trades, master of none. Confusing pricing. Card carrying ESRI users will love it.

**CartoDB:** A GIS programmers wet dream. The power of PostGIS and Mapnik but none of the setup headache, all wrapped in attractive packaging.

**CloudGIS:** Online alternative to traditional client/server GIS setup. Many features but hampered by a frustrating user interface.

**GeoCommons:** The place to share your data and use the data of others. No coding required. Slick UI, great visualisation tools.

**MangoMap:** The quickest way for GIS users to publish web maps. No coding required. Lots of map features, slick UI that's geared towards simplicity.

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**MapBox:** Making maps sexy again. Programmer focused. Great for maps that need to fit a brand and be able to scale for high traffic.

[Register to receive the free \[PDF\] E-Book HERE](#)

- See more at: <http://www.gisuser.com/content/view/29175/28/#sthash.u0U34vfR.dpuf>

Thanks to [5 things on Friday #8](#) for this item

### [SDI Cookbook update](#)

The SDI Cookbook, in its wiki version, now has an updated Chapter 10 to reflect the latest slate of standards and popular version numbers. We seek contributing editors for the other Chapters to also bring them up-to-date. About three months prior to the next GSDI Conference we will seek to affix a date and snapshot the Cookbook into a "SDI Cookbook 2013" PDF version. By saving a PDF and giving it a date of publication, it will clarify the reference and citation of the document and provide a time context.

If you are interested in helping update any of the chapters, please contact [Douglas Nebert](#).

[Rise of the Drones](#) Meet a new breed of flying robots, from tiny swarming vehicles to giant unmanned planes.



Aired January 23, 2013 on PBS

These unmanned flying robots—some as large as jumbo jets, others as small as birds—do things straight out of science fiction. Much of what it takes to get these robotic airplanes to fly, sense, and kill has remained secret. But now, with rare access to drone engineers and those who fly them for the U.S. military, NOVA reveals the amazing technologies that make drones so powerful as we see how a remotely-piloted drone strike looks and feels from inside the command center. ...

Discover the cutting edge technologies that are propelling us toward a

new chapter in aviation history as NOVA gets ready for "Rise of the Drones."

Source: NOVA/PBS

### [Imaging With Radar](#)

Synthetic aperture radar (SAR) uses radio waves to "see" in complete darkness and through rain, clouds, and snow. It is becoming a regular component of unmanned aerial vehicles, or UAVs, like those flown over Afghanistan. The following picture shows what Washington, D.C. would look like if it were imaged by a SAR-equipped spy plane flying overhead on a snowy winter day.

Source: NOVA/PBS



### [NewGeography website](#)

### [Mapping London blog](#)

### [Borderlines blog from the New York Times](#)

Countries are defined by the lines that divide them. But how are those lines decided — and why are some of them so strange? Borderlines explores the stories behind the global map, one line at a time.

by Frank Jacobs

Frank Jacobs is a London-based author and blogger. He writes about cartography, but only the interesting bits. His other blog is [Strange Maps](#)

### [Thematic Mapping blog](#)

Terrain mapping with Mapnik

### Blog of [Ragnvald Larsen, geographer](#)

Geographer working with maps at the Norwegian Directorate for Nature Management. Part of his job is to contribute to development aid projects.

### [International Society for Digital Earth](#) - August, 2012 [Newsletter](#)

### [Thoughts on the Geospatial industry, Open Standards and Open Source](#) Cameron Shorter's blog

### [New Zealand - SDI Cookbook Chapter 6 – Government and Industry, moving forward.](#)

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[Carnival Of The Geospatialists #3 - Musings and Down-Right Cool Things Shared by the Geo Faithful](#)

[Open Planet 5, the magazine published for the International gvSIG Conference is now available in electronic format](#)

[SDI Magazine](#)

[Mother Pelican: A Journal of Sustainable Human Development](#)

The December 2012 issue has been published

[LiDAR News, Vol 3, No 1](#) (January 2013 Newsletter)

[LiDAR News magazine](#) (Vol 3, No 4, Spring 2013)

[Think Quarterly](#) – Google's new on-line magazine

[Coordinates](#) monthly magazine - [PDF](#) (February 2013)

[SERVIR-Africa community news](#)

[GISuser - GIS and Geospatial Technology News](#)

[National Geographic website](#)

[The Atlantic Cities website](#) including [Maps](#)

[Professional Surveyor](#) magazine

[The American Surveyor](#) newsletter (January 30)

[My Co-ordinates e-zine](#) – October issue (PDF)

[UN-SPIDER](#) December 2012

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## Just for Fun!



### [Hike the Grand Canyon via Google Maps](#)

You can now explore the Grand Canyon without even being there.

Thanks to Google Maps, [panoramic images of the famed canyon](#) went online today, displaying more than 75 miles worth of trails and surrounding roads.

Just by moving your mouse or swiping your finger, you can wend your way through any of the trails to marvel at some of the amazing images captured by the

Google Maps team. One view guides you along the [Blue Angel Trail](#), another takes you past the [Colorado River](#), and a third pops you a couple of hours away to gaze at [Meteor Crater](#).

Source: Scientific American

### [Treasured maps](#)

In a world of Google and GPS, it's interesting that the significance of antique maps, the ones actually printed on paper, appears to be increasing. The maps of greatest value to collectors are those charting the development of the modern world. On the earlier maps, the existence of some Great Southern Land yet to be discovered is guessed at, usually fancifully. Maps such as these, and associated artworks showing events in the history of the region, can be found in Louis Kissajukian's Antique Print and Map Room in George Street, Sydney.

Source: Sydney Morning Herald

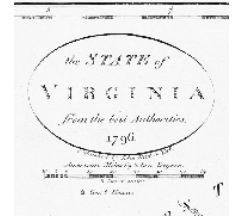
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### [Putting Law on the Map](#)

William C. Wooldridge has been collecting old maps of Virginia since 1970. Last year the University of Virginia Press put out a big book based on his collection under the title *Mapping Virginia: From the Age of Exploration to the Civil War*. It is a handsome cross between a historical atlas and an art museum exhibition catalog. The reader sees the evolution of what Thomas Jefferson called “my country” through the eyes and cartographic artwork of contemporary observers from the sixteenth century to the nineteenth.

Source: Green Bag



### [Mapping Fun! 30+ Maps You Thought You'd Never Need](#)



*It's always fun to see maps and map related articles featured in the mainstream and this week BuzzFeed has delivered a fun treat in a piece that looks at loads of maps that you thought you'd never need! The article shows off some cool works of cartographic science and weirdness to reveal some interesting findings like: The World if land masses and oceans were reversed, The Great Lakes if they were in Europe, and a map showing everything in New York that people call 311 to complain about! My personal favorite might just be the Arctic Time Zone map although the Super Mario Brothers World Map (left)*

*comes a close second!*

Thanks to [5 things on Friday #8](#) for this item

### [Maps - An Ode to New York's Glorious DIY Sidewalk Seating Culture](#)

[Street Seats](#), a new project from urban planning and design firm [Street Plans Collaborative](#), pays tribute to the importance of such humble streetside accommodation by crowdsourcing and mapping places to sit around the city – the countless benches, chairs, and stools that are just part of the culture here. “A couple of months after I moved to New York, I started to notice it,” says Mike Lydon, a principal at Street Plans. “The neighborhoods were full of these little benches and perches.”

Lydon began taking pictures of the seating he saw – most of which is, I should note, of the more official street furniture variety than the mobile chairs I remember so fondly from Astoria. Once he had collected enough images, with the help of an intern, he and his colleagues put them online, both as a photo gallery and as a [clickable map](#) that lets you view seats in any given neighborhood. Now the site is open for submissions from the public, which are coming in already.

Source: Atlantic “Cities”



### [LIVE DEMO of Google's Glasses – sky-diving over San Francisco to arrive at Conference](#)

Google Founder Sergey Brin likes to work on projects that have the potential to change the world, like the Google car which we know uses LiDAR to navigate. He is also very passionate about his Google Glass project as you will see in what has to be the most dangerous and over the top live demo at a high tech conference that anyone has ever even dreamed of pulling off.

Source: LiDAR News “Video of the Week”

See also [Brin gives rose-tinted view of net glasses](#) for a similar video

Source: Sydney Morning Herald

### [Having Fun with the 4-Color Theorem](#)

The 4-color theorem is fairly famous in mathematics for a couple of reasons. First, it is easy to understand: any reasonable map on a plane or a sphere (in other words, any map of our world) can be colored in with four distinct colors, so that no two neighboring countries share a color.

Second, computers were instrumental in the proof of the four-color theorem. The theorem had been suggested in 1852 as a conjecture, but people were unable to prove it until 1976, when Kenneth Appel and Wolfgang Haken reduced the problem to a number (1936, to be precise) of specific cases and wrote a computer program to check each case. It was the first major theorem to be proved using a computer, and for some people, it raised questions about what it means to prove a theorem. Did this computer



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proof "count?" Were mathematicians going to be obsolete soon? People are still debating the role of computers in mathematical proof and the future of mathematics as a human endeavor.

Source: Scientific American

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### Training Opportunities

**[GEOSS Future Products Workshop 2013](#)** 26-28 March 2013, NOAA, Silver Spring, MD

This workshop provides a unique opportunity to learn how GEOSS as a platform makes all sorts of sensor and model data available in an interoperable manner. Data streaming from in-situ and remote sensing sensors (Sensor Web), models (Model Web) offers a huge potential to generate a wide portfolio of on-demand and near real time products. This multi-day workshop will feature: invited speakers and contributed positions; breakout sessions to exchange views and provide proposed approaches; with summaries posted on the web.

To meet the GEO aim of achieving interoperability of existing and new systems that provide essential environmental observations and information, this workshop builds on prior GEO activities including: the GCI Architecture Workshop in 2008, SIF Interoperability Workshops, GEO Sensor Web Workshops; and initiates similar discussions for the GEOSS Model Web. In the GEO Work Plan these activities are elements of GEO Task IN-05 "GEOSS Design and Interoperability".

Please register online [here](#). The workshop is free of charge. Online registration will close on **4 March 2013**. The agenda is now available [online](#). A more detailed agenda will be made available soon!

**[Course Spotlight: Master of Spatial Information Science](#)**

The University of Melbourne [Course Spotlight: Master of Spatial Information Science](#)

Spatial information is an essential and indispensable part of any economy's infrastructure. It is needed in all walks of life and on many scales, with applications in land tenure systems, environmental modelling, food production, disaster management, climate change modelling, engineering, architecture and urban planning. Current industry shortfalls in spatial information practitioners combined with a growing demand in Australia and internationally, ensure graduates a range of well-paid job opportunities.

Find out more about the [Master of Spatial Information Science](#), as well as our [scholarship opportunities](#).

**[Learn to Use HTML5 with Esri ArcGIS](#)**

Get a brief introduction to HTML5 and learn how to use HTML5 technologies with the ArcGIS API for JavaScript and ArcGIS Online.

Source: GIS User and [ESRI](#)

**[Large-Scale 3D Laser Scanning: The Complete Process](#)**

Don't worry if you missed the live webinar, "Large-Scale 3D Laser Scanning: The Complete Process". It's now available online for you to watch any time!

**[e-Learning for the Open Geospatial Community](#)**

We are pleased to inform that the course repository for the ELOGeo (An e-Learning Framework for Using Geospatial Open Data, Open Source and Open Standards) project is ready.

ELOGeo is a JISC-funded project based at the Centre for Geospatial Science, the University of Nottingham in partnership with the Mimas Centre of Excellence at the University of Manchester. ELOGeo main collaborators are Open Source Geospatial Foundation, Open Geospatial Consortium (OGC), Ordnance Survey, Open Nottingham, International Cartographic Association (ICA) and gvSIG Association.

[More details of ELOGeo](#).

**[gvSIG Training platform opens with a first course for gvSIG users](#)**

The gvSIG Association tries to increase its learning offer through online courses, publishing a new learning platform: gvSIG Training. In parallel, the gvSIG Association launches its official certification program.

It's a step forward in the training processes in free geomatic, creating an online training centre, that contributes to the spreading as well as to the sustainability of the gvSIG project. Training without geographic barriers, and with the best professionals.

In this platform, you will find courses in several languages to learn to use the different applications of the gvSIG project, in a user level as well as in a developer one. The courses list will be extended gradually with different

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gvSIG and free geomatic specialization courses (databases, map servers...), with the objective of covering the different needs of the Community.

The courses offered by gvSIG Training are part of the training routes that are required to obtain the gvSIG official certification.

For further information:

- gvSIG Training: <<http://gvSIG-training.com/>>

- gvSIG Certifications: <<http://www.gvsig.com/services/certification>>

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### Funding Opportunities, Awards, Grants

#### [GDN Global Development Awards and Medals Competition](#)

Gear up to submit new research proposals and completed papers for the **2012 GDN Global Development Awards and Medals Competition (AMC)**. The **Global Development Network** is inviting researchers from developing countries and transition economies to submit proposals and completed papers. Here is your chance to receive up to US\$ 30,000 as part of the Competition.

#### Competition Categories:

- **Medals for Research on Development (Medals)** for exceptional completed research papers
- **Japanese Award for Outstanding Research on Development (ORD)** for original, policy-relevant research proposals

#### Opportunities for Finalists and Winners:

- The top-ranked Medals finalists under each theme to present their papers at the **plenary sessions** in the [14th Annual Global Development Conference](#) to be held in Manila, The Philippines, in June 2013 (discussants and panelists will comprise well-established scholars/experts). **Travel and stay will be funded by GDN**
- The ORD finalists under each theme to present their proposals at the parallel sessions in the [14th Annual Global Development Conference](#). **Travel and stay will be funded by GDN**
- Participate in a **two-day training workshop** before the Conference to **enhance your research communications skills**
- The winners will be chosen by an eminent jury at the Conference

#### Research Themes:

Proposals and completed research papers are being invited for the following themes:

- **Inequality**
- **Social Protection and Social Policies**
- **Inclusive Growth**

**Application Deadline: 11 March, 2013** (Indian Standard Time 6:00 PM)

**To Apply:** Please [visit](#). All applications and documents must be submitted electronically.

For queries related to the Competition, please [write to us](#).

For more details, [please log on](#).

#### [Open Government Datavis Competition](#)

The Guardian Data Blog, Google and the Open Knowledge Foundation are teaming up to find the best open government datavis out there. There is a top prize of \$2,000 on offer for the best visualisation of open government data.

Applicants can use existing data visualisation tools or develop their own new one. The competition organizers want to be wowed and educated. You need not be a developer in order to enter, the most important thing is that the data you have chosen to visualise is approached in an interesting and compelling way.

**IMPORTANT NOTE:** The competition is open to citizens of the UK, US, France, Germany, Spain, Netherlands, Sweden.

You can use the Data Catalogs [website resource](#) to find open government data to get you started, but of course feel free to bring your own data to the party. The most important thing is that all data used conforms to the [Open Definition](#).

To enter fill in [the form](#) over on the Guardian's website – feel free to [ask questions about the competition](#).

**The competition closes on 2nd April 2013.**

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### [Asia Geospatial Excellence Awards 2013](#)

Nominations are invited for Asia Geospatial Excellence Awards 2013 under the auspices of Asia Geospatial Forum 2013 (Kuala Lumpur 24-26 September). The awards shall be conferred to the exemplary geospatial applications development, technology innovations and policies/programs in the region.

**Submission Deadline: 30 June 2013**

### [PTI 2012-2013 Solutions Awards: now accepting entries](#)

**Entry Deadline: Friday, March 29, 2013**

Public Technology Institute's Solutions Awards competition recognizes outstanding achievements in local government applications of technology that enhance community services, improve internal operations and reduce costs.

The competition is open to all [PTI member jurisdictions](#), with no limit to the number of entries.

Technology categories:

Telecommunications and Information Technology (I.T. management, operations and infrastructure)

Web Services, E-Government and Mobile Apps

GIS (Geospatial Information Systems)

Public Safety and Emergency Management

Sustainability (energy, including energy assurance planning; environment, public works, transportation)



### [2013 IEEE Data Fusion Contest](#)

Recently, the IEEE Geoscience and Remote Sensing Society announced plans for its **2013 Data Fusion Contest**. The Contest, which helps connecting students and researchers around the world, evaluates existing methodologies at the research or operational level to solve remote sensing problems using data from various sensors. The Contest is open not only to IEEE members, but to everyone, and consists of two parallel competitions: Best Paper Award and Best Classification Award. The winning teams will receive an iPad, an IEEE Certificate of

Appreciation, and a free open access publication in an IEEE GRSS Journal. Final results will be announced at the 2013 IEEE International Geoscience and Remote Sensing Symposium in Melbourne, Australia, in July 2013.

Thanks to AnyGeo blog

### [Ideas Challenge](#)

The Ideas Challenge is at the core of the GMES Masters competition. It invites students, entrepreneurs, start-up companies and SMEs to submit their ideas for an innovative commercial use of GMES to a secure online database on the GMES Masters website. The best idea for a commercially viable business idea using GMES data will be rewarded. The winner will be rewarded with a cash prize of EUR 10,000 as well as the chance to get his idea further developed in one of the six ESA Business Incubation Centres (BICs). The incubation package has a value of up to EUR 60,000.

### [ESA App Challenge](#)

The European Space Agency (ESA) will award the ESA App Challenge to the best application idea for the usage of GMES on mobile phones. Proposals shall address one or more GMES main thematic areas (land, marine environment, atmosphere, climate change, emergency management). ESA is looking for ideas that can be implemented quickly into a profitable business. The application should consist of a base app containing info and news on GMES, as well as one or more specific content modules that provide relevant location-based data to users in real time. The winner will be considered for support by one of the six European Space Agency's Business Incubation Centres (ESA BICs) across Europe (value up to EUR 60,000).

### [European Space Imaging High-Res Challenge](#)

European Space Imaging (EUSI) is Europe's leading provider of Very High-Resolution (VHR) satellite data. EUSI will award the best application idea using the most advanced VHR satellite data. Application ideas which are easily implementable, sustainable, cut costs and create efficiencies are of high interest. Participants are required to submit detailed application ideas including business concepts. The winner will be awarded a data package of EUSI satellite data worth up to EUR 20,000 for use in further developing the winning application.

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### [DLR Environmental Challenge](#)

DLR is looking for new applications in Earth observation, especially proposals addressing the mapping of the environment and climate. Ideas for using Earth observation to manage sustainable supplies of energy are also welcome. In addition to any kind of non-satellite geoinformation, proposals should be based on existing or imminent Earth observation satellite data that is available either for free or under commercial terms. The product or service generated from the idea should support either professionals from organisations and companies in environmental assessment, or the general public and consumer-oriented markets. Both regional and global applications and services are possible. Innovative ways to link the service with users are especially encouraged. The ideas should also describe a realistic scenario for their implementation involving either the general public or commercial benefits. The winner(s) will receive a voucher for a workshop or initial coaching according to what further realisation of the idea requires.

### [Best Service Challenge](#)

The Best Service Challenge invites service providers to upload profiles of their existing services within the main thematic areas of GMES to the GMES Masters competition website. The Best Service Challenge aims at increasing the awareness of existing Earth Monitoring Services and their benefits to European citizens. The winner of the Best Service Challenge will benefit from a substantial satellite data quota made available with financial support by the European Commission.

### [T-Systems Cloud Computing Challenge](#)

T-Systems will award the prize for its Cloud Computing Challenge to the best GMES application or service idea that will make use of the cloud computing model Infrastructure-as-a-Service (IaaS) to provide Earth observation data on demand via user-oriented web portal or mobile devices. T-Systems will assist the winner in getting the awarded project off the ground. They will support the winner to realise an innovation project, which could lead to a long-term partnership.

### [Challenge to spur the geospatial industry](#)

The Singapore Land Authority has launched OneMap Challenge that seeks to promote the development of innovative map-based desktop and mobile applications by businesses and the community.

The OneMap Challenge provides a platform for application developers to showcase their creativity through the apps they develop to an increasingly tech-savvy population and enterprises, including those represented by the Association of Small and Medium Enterprises (ASME) which is one of the competition promotion partners. The Challenge also aims to facilitate collaborations between potential business partners for creating location-based apps that are useful for business enterprises and the general community.

With two top prizes of \$20,000 cash each and other attractive prizes up for grabs, the OneMap Challenge is divided into two categories – Web Applications for applications that run on web browsers and Mobile Applications for those that run on smart phones, tablets and other portable devices.

Visit <http://www.sla.gov.sg/OneMapChallenge> to learn more about OneMap Challenge and check out the OneMap Facebook page at [www.facebook.com/OneMap](http://www.facebook.com/OneMap).

Source: Geospatial World and [SLA press release](#)

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## Employment Opportunities

### [GIS Job Board Launches New Website: \[www.gisjobboard.com\]\(http://www.gisjobboard.com\)](#)

New Site Provides Employers and Job Seekers Tools to Post and Search Jobs and Resumes in the GIS and Geospatial Disciplines

GIS Job Board has launched a new website specifically dedicated to GIS and other geospatial disciplines. The new site makes it simple for employers and job seekers to post and search for jobs and resumes. The site was created to serve the growing needs of the GIS community and help with recruiting and job seeking efforts.

Visitors also have the option to view the site in a different language if they choose, making it easier for them to have access to the content

Registered users can receive jobs or resumes by email. They can also flag jobs and resumes as well as save searches, setup resume alerts, and save resumes and jobs. Users have the capability of private messaging other users in case they ever want to communicate with someone.

For more information about GIS Job Board, please visit their website at [www.gisjobboard.com](http://www.gisjobboard.com)

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### Conference Proceedings

#### **Modernization of land administration and management systems** Uganda: 17-18 January 2013



#### **Implementation of land information systems (LIS): sharing experiences, innovations and good practices.**

Throughout the two day conference, discussions focused on technical issues related to the choice of the solutions adopted, the methodologies to be implemented and the technical equipment installed. Other topics included issues of protection against hacking, the importance of training local people, the communication targeting administrative staff and the public, and the importance of measuring concrete benefits of such projects and their returns on investment. Several presentations

focused on the use of aerial photography or satellite imagery in cadastral projects. As the cost of a geographic dataset depends heavily on its accuracy, it is essential to define the data sources that will be used for the establishment of the cadastral reference from the start.

Picking up a key point of discussion on the theme of the added value of NSDI projects for developing countries at the regional conference IGN France International held in April 2012 in Ouagadougou (Burkina Faso) **the link between land projects and National Spatial Data Infrastructure (NSDI) was also addressed. Land projects are sometimes considered the cornerstone of NSDI initiatives.** However the situation varies considerably from one country to another. Clear links exist between LIS projects and NSDI initiatives; however, some countries initiated NSDI projects without systematic land initiatives, while others have taken advantage of LIS projects to develop national spatial data infrastructure.

**Most agreed that the highest authorities must play a determining role in the definition of public policies legal frameworks and the way these projects move forward.** Without this strategic vision, both LIS and NSDI projects encounter difficulties fail to get off the ground or are not become sustainable. **The completion of a geographic data set appears to be an essential component for both LIS or NSDI projects** and should be taken into account from the very beginning.

In her final intervention, the Minister of Lands insisted on the added value of the LI project led by IGN France International. Securing land titles will reduce poverty and enhance economic development in Uganda.

More details on the regional conference and the programmes will be available at: [www.lis-uganda.go.ug](http://www.lis-uganda.go.ug) and at [www.ignfi.com](http://www.ignfi.com)

#### **GISSA Ukubuzana 2012 Conference Proceedings**

Almost 600 delegates and 66 exhibitors attended the Geo-Information Society of South Africa ([GISSA](http://www.gissa.org)) Ukubuzana 2012 conference which was held at Emperors Palace from 2 to 4 October 2012 in Johannesburg, South Africa.

Some 60 peer-reviewed academic papers, general papers, short papers and poster papers were presented at GISSA Ukubuzana 2012. A particular hit with the delegates were the local government, demographic and mobile streams.

#### **Spatial@Gov, Canberra, November 2012**

The conference program addressed two broad categories under the main conference theme of Future Directions: Linking People, Policy and Place.

- The **Strategy** theme explored the policy settings required to ensure that Governments can best use location-based business intelligence in support of better informed policy and planning decisions, and more efficient targeted service delivery to Australian and New Zealand citizens.
- The **Innovation** theme looked closely at emerging and future trends and how Governments might work with the commercial and research sectors in order to drive future innovation in the Australian and New Zealand Spatial Community and globally.

Most of the proceedings are now [available online](#).

#### **Documentation: 19th United Nations Regional Cartographic Conference for Asia and the Pacific**

The 19th United Nations Regional Cartographic Conference for Asia and the Pacific (UNRCC-AP) was held in Bangkok, Thailand from 29 October to 1 November 2012. Documentation from the event is available online. The Permanent Committee on GIS for Asia and the Pacific (PCGIAP) decided to rename itself UNGGIM-AP.

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### Conferences, Events

For upcoming events of global or major international interest, please visit the [upcoming conference list](#) on the GSDI website – as this conference list will be reserved for conferences within or with specific interest to the Asia Pacific Region.



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

#### [Call for Expression of Interest to host AARSE 2014 and future Conferences](#)

Call for Expression of Interest to host the 10th biennial International Conference of the African Association of Remote Sensing of the Environment (AARSE) in October 2014 and future Conferences.

Date	Location	Event
<b>March 2013</b>		
<b>11-15 March</b>	Islamabad, Pakistan	<p><u><a href="#">United Nations/Pakistan International Workshop on Integrated Use of Space Technologies for Food and Water Security</a></u></p> <p>The completed application form, properly endorsed by the applicant's government/institution, should be received by the UN Office for Outer Space Affairs no later than Monday, 21 January 2013. Applications received after the deadline will be considered, but applicants will not be eligible for financial support.</p>
<b>18-9 March</b>	Singapore	<p><u><a href="#">1st Annual International Conference on ACE: Call For Papers 2013</a></u></p> <p>IMPORTANT DATES Full Paper Submission Deadline:23rd November 2012 Author Notification:7th December 2012 Final Paper (Camera-Ready) Submission Deadline:31st December 2012 Early Bird Registration Deadline:18th January 2013 Late Registration Deadline:13th February</p> <p style="text-align: right;"><a href="#">Contact</a></p>
<b>24-28 March</b>	Baltimore, USA	<p><u><a href="#">ASPRS 2013 Annual Conference:</a></u></p> <p>Confluence by the Bay - A Gathering of Geospatial Insights</p>
<b>25-7 March</b>	Amman, Jordan	<p><u><a href="#">Spatial Data infrastructures Middle East, 2013</a></u></p> <p>In the Middle East the development of geographic information systems and their function has been rapid. Governments have over the past decade realised the need to be able to access and use the vast amounts of data collected on a daily basis. Whilst individual departments or agencies possess the tools to analyse, utilise and disseminate information this can leave gaps at a governmental or even national level.</p> <p>Benefits of attending the Spatial Data Infrastructure Middle East Conference, organized with the support of Royal Jordanian Geographic Center:</p> <ul style="list-style-type: none"> <li>- Explore Geographic Information Systems and how your specific organisation can benefit from a unified and achievable plan</li> <li>- Discuss future SDI development plans with senior Government decision makers</li> <li>- Discover end-users GIS and geospatial requirements and solutions being considered</li> <li>- Find out the challenges faced in building an SDI and how to overcome them</li> <li>- Hear about how government department interoperability can be improved through the development of an SDI</li> <li>- Learn about the latest technologies available and which is the best fit for your SDI plans</li> </ul>

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April 2013		
15-19 April <b>"AMENDED"</b>	Canberra, Australia 	<b><u>Surveying &amp; Spatial Sciences Conference 2013</u></b> Andrew Bashfield from Intergraph Corporation and John Weaver from Office of Spatial Policy (OSP) are hosting a Spatial Data Infrastructure (SDI) workshop as part of the Surveying & Spatial Sciences Institute (SSSI) national conference in Canberra from 1.00pm on Monday, 15 April 2013. <a href="#">Conference program</a>
22-26 April	Beijing, China 	<b><u>35th International Symposium on Remote Sensing of Environment (ISRSE35)</u></b> <i>The papers included in the 35th International Symposium on Remote Sensing of Environment proceedings will be published by IOP Publishing Ltd., UK. The proceedings are available through the IOP Conference Series: Earth and Environmental Science. All published papers will be indexed by EI Compendex. Authors interested in the themes and topics of ISRSE35 are welcome to submit their original manuscripts. Submissions to ISRSE35 will be peer-reviewed to ensure high-quality scientific content and well-written English, in accordance with the Peer Review Policy for the IOP Conference Series.</i> <b>ABSTRACT SUBMISSION</b> Interested contributors should submit a summary of the paper they propose for presentation. <ul style="list-style-type: none"> <li>• All submissions should be in English.</li> <li>• Abstracts should reach the Technical Programme Committee no later than 30 September 2012.</li> <li>• Notification of paper acceptance will be made by 10 December 2012.</li> <li>• Each presenting author will be required to register and pay by the author registration deadline on Monday, 25 February 2013, to ensure their abstract is included in the final programme.</li> <li>• Please submit abstracts through the Abstract Submission link at <a href="http://www.isrse35.org">http://www.isrse35.org</a></li> <li>• All abstracts must be submitted online.</li> </ul> <b>IMPORTANT DATES:</b> Registration Opens: Monday, 10 September 2012 <b>Abstract Submission Deadline:</b> Sunday, 30 September 2012 <b>Workshop Submission Deadline:</b> Tuesday, 30 October 2012 Acceptance Notification Monday, 10 December 2012 <b>Early-bird Registration Deadline:</b> Friday, 25 January 2013 <b>Final Paper Deadline:</b> Friday, 15 February 2013 <b>Author Registration Deadline:</b> Monday, 25 February 2013 Standard Registration Deadline Monday, 15 April 2013 Contact detail: ISRSE35 Secretariat E-Mail: <a href="mailto:isrse35@ceode.ac.cn">isrse35@ceode.ac.cn</a> Tel: +86 10 8217 8969 Fax: +86 10 8217 8968 Website: <a href="http://www.isrse35.org">www.isrse35.org</a> Address: Center for Earth Observation and Digital Earth, CAS No. 9 Dengzhuang South Road, Haidian District, Beijing 100094, P.R. China
24 - 26 April	Novosibirsk, Russia	<b><u>Siberia - Interexpo GEO-Siberia 2013</u></b> IX International exhibition and scientific congress "Interexpo GEO-Siberia-2013" -"Advanced Geospatial and Surveying Technologies for Environmental Management and Sustainable Development" <b>Contact :</b> <a href="http://www.ssga.ru/main/news/view/428/1/5555.html">http://www.ssga.ru/main/news/view/428/1/5555.html</a>
25 - 26 April	Singapore	<b><u>First Asia Pacific 3D Documentation Conference</u></b> <b><u>Connecting 3D Communities</u></b>

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May 2013		
1 – 3 May	Tainan, Taiwan	<p><b><a href="#">8th International Symposium on Mobile Mapping Technology (MMT 2013)</a></b>            MMT is an academic conference officially recognized by International Society for Photogrammetry and Remote Sensing            MMT 2013 Symposium: 1st May-3rd May, 2013            MMT 2013 Summer School: 29th-30th April, 2013  <b>Contact</b> : <a href="http://conf.ncku.edu.tw/mmt2013/index.htm">http://conf.ncku.edu.tw/mmt2013/index.htm</a></p>
6-10 May	Abuja, Nigeria	<p><b><a href="#">The FIG Working Week</a></b>            The Working Week will bring surveyors and land professionals from all over the world together to meet while specific focus will be given to Africa. The conference is organised jointly by <b>FIG</b> and the <b>Nigerian Institution of Surveyors, NIS</b>, one of the three FIG member associations in Nigeria.</p>
13-16 May	Rotterdam, The Netherlands	<p><b>Register before 15th Feb 2013 to avail complementary Awards Night and Gala Dinner Ticket</b>  <b><a href="#">Geospatial World Forum</a></b> is a conference cum exhibition which has always invoked the geospatial community with its relevant and thought-provoking themes. This year, the conference which is scheduled from <b>13-16 May 2013</b> at <b>Beurs World Trade Center, Rotterdam, The Netherlands</b> aims at increasing our understanding of the concept of Monetising the value added by geospatial industry so far with its theme "<b>Monetising Geospatial Value and Practices</b>".            Please <a href="#">submit</a> your abstracts. <a href="#">For queries</a>.</p>
13-16 May <b>"NEW"</b>	Minneapolis, MN	<p><b><a href="#">Free and Open Source Software for Geospatial North America (FOSS4G-NA) Conference</a></b>            The Call for Presentations closed February 15, 2013.</p>
30 May - 1 June	Hong Kong	<p><b><a href="#">8th International Symposium on Spatial Data Quality 2013</a></b>            The Symposium provides an interdisciplinary forum for leading scientists and young researchers to present their latest research developments and share their experience in this field. The Symposium will include keynote speeches and parallel sessions.  <b>Themes</b></p> <ul style="list-style-type: none"> <li>- Uncertainties in real world entities and ontology</li> <li>- Spatial accuracy assessment</li> <li>- Accuracy evaluation for DEM</li> <li>- Temporal uncertainty in spatial data</li> <li>- Incompleteness of spatial data</li> <li>- Logical consistence in spatial database</li> <li>- Semantic uncertainty in geographic data</li> <li>- Uncertainty in remotely sensed image processing</li> <li>- Uncertainty versus scales</li> <li>- Quality assessment in spatial data generalization</li> <li>- Spatial data models for uncertain objects in GIS</li> <li>- Model validation with imperfect ground truth data</li> <li>- Assessment of quality of crowdsourcing spatial data</li> <li>- Uncertainty propagation in spatial analyses and operations</li> <li>- Spatial querying and reasoning with uncertain data</li> <li>- Uncertainty in geographical and environmental analysis</li> <li>- Spatial data quality and decision making</li> <li>- Spatial statistics</li> <li>- Geostatistical methods for spatial data quality assessment</li> <li>- Stochastic spatial simulation</li> <li>- Spatial data quality and web- and mobile-based services</li> <li>- Uncertainty in geovisual analytics</li> <li>- Quality of spatial data visualization</li> <li>- Meta-data and model for GIS data</li> </ul>

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June 2013		
<b>8 – 9 June</b> <b>“NEW”</b>	San Francisco, USA	<a href="#">State of the Map - US</a> Workshop – June 7 and OSM Hack Day – June 10
<b>19 – 21 June</b>	Manila, Philippines	<a href="#">14th Annual Global Development Conference</a>
<b>24 – 27 June</b>	Ho Chi Minh City, Vietnam	<a href="#">Eighth International Conference on "Geographical Analysis, Urban Modeling, Spatial Statistics" GEOG-AND-MOD 13</a> in conjunction with The 2013 International Conference on Computational Science and its Applications ( <a href="#">ICCSA 2013</a> ) Submission - papers should be submitted at: <a href="http://ess.iccsa.org/">http://ess.iccsa.org/</a> [please don't forget to select " <b>Geographical Analysis, Urban Modeling, Spatial Statistics GEOG-AND-MOD 13</b> " workshop from the drop-down list of all workshops.] <b>Important dates</b> 31 January 2013: Deadline for full paper submission 10 March 2013: Notification of acceptance 6 April 2013: Deadline for Camera Ready Papers June 24-27, 2013: ICCSA 2013 Conference
<b>24 – 27 June</b>	Ho Chi Minh City, Vietnam	<a href="#">1st International Workshop on Agricultural and Environmental Information and Decision Support Systems (AEIDSS 2013)</a> in conjunction with The 2013 International Conference on Computational Science and its Applications ( <a href="#">ICCSA 2013</a> ) Deadline for Full Paper submission: extended to February 1, 2013 Notification of Acceptance: March 10, 2013 <b>Workshop description:</b> Monitor and manage sanitary risks, study climate change, environmental impacts in connexion with agricultural practices (the use of pesticides, for example), mapping the good ecological status of rivers, simulate spread of forest fires ... are environmental and agricultural challenges for which Information and Decision Support Systems represent effective solutions. New theoretical and technical challenges emerge from the integration of several scientific domains such as agronomy, mathematics, information technology and computer science. The objective of the proposed workshop is to show how the latest advances in research in information and decision-support systems can be applied to environmental and agricultural matters. Information and Decision Support Systems topics (include but are not limited to): <ul style="list-style-type: none"> <li>* Database, Data Warehouses</li> <li>* Geographic Information Systems</li> <li>* Cloud/Grid Computing</li> <li>* Distributed information systems</li> <li>* Interoperability between information systems</li> <li>* Data Integration</li> <li>* Geovisualization Knowledge management</li> <li>* Spatial Big Data</li> <li>* Geosensor network</li> <li>* Software Engineering</li> <li>* Data Mining ...</li> </ul> Proceedings and Journal special issue: Accepted papers of the Workshops will be included in a Springer-Verlag Lecture Notes in Computer Science (LNCS) <a href="#">volume</a> . Selected papers will be invited to submit extended versions to a special issue of the Ecological Informatics <a href="#">journal</a> .

July 2013		
2 – 5 July	Salzburg, Austria	<p><b><a href="#">GI Forum 2013 – Creating the GISociety</a></b>            The international <b>GI Forum</b> attracts an <b>interdisciplinary</b> audience interested in discussing progress and new ideas in GIScience. The GI_Forum communicates <b>innovative research and learning in Geographic Information Science</b> with focus on hardware, software, orgware and brainware for the GISociety, and their inter-relationships. Young researchers are especially invited to contribute and discuss their research. Together with recognized scientists they will find a vibrant community from academia, business, and education ready to embrace new ideas and explore new research directions. GI Forum runs concurrently with the highly regarded German language conference on <a href="#">Applied Geoinformatics – AGIT</a>. The two symposia share some 1200 participants, the innovative AGIT EXPO exhibit and stimulating social events.            Submission deadline <b>February 1, 2013</b>. <a href="#">Contact</a>.</p>
16 – 18 July	Gold Coast, Australia	<p><b><a href="#">IGNSS 2013</a></b>            The International Global Navigation Satellite Systems (IGNSS) Society Inc. is pleased to announce IGNSS 2013  <b><i>Closing Date for Submission of Abstracts: Monday 4<sup>th</sup> February, 2013:</i></b>            Information regarding on line submission of abstracts and abstract templates will be updated in due course on the <a href="#">IGNSS Society website</a> .  <b><i>Submission of Peer Reviewed and Non Peer Reviewed Papers:</i></b>            Information regarding On Line Submission of Peer Reviewed and Non Peer Reviewed Papers will be updated in due course on the <a href="#">IGNSS Society website</a> (Click here).  <b><i>IGNSS Free Membership:</i></b>            There is no fee to register for Membership of the IGNSS Society. Complete the <a href="#">On Line Membership Form</a> .            Benefits of Membership include reduced Symposium Registration Fees.  <b>Contact :</b> <a href="http://www.ignss.org/">http://www.ignss.org/</a></p>
21 – 26 July	Melbourne, Australia	<p><b><a href="#">IEEE International Geoscience and Remote Sensing Symposium (IGARSS)</a></b>            On behalf of the IEEE Geoscience and Remote Sensing Society and the IGARSS 2013 Local Organising Committee, we are delighted to invite you to Melbourne, Australia for IGARSS 2013. We are looking forward to welcoming leading scientists, engineers and educators from the diverse disciplines that make up the Geoscience and Remote Sensing community. We also hope to attract new delegates from the Asia-Pacific and Oceania regions. We will be offering a world class technical program encompassing traditional IGARSS topics and new topics reflecting the theme of the 2013 Conference, "Building a Sustainable Earth through Remote Sensing". This theme was selected to emphasize the issues that most affect the Earth's environment, and the human impact on the planet. We welcome both seasoned and new delegates to Melbourne in July 2013.</p>
August 2013		
26-29 August	Kuching, Sarawak, Malaysia	<p><b><a href="#">The 8th International Symposium on Digital Earth (ISDE8)</a></b> with the theme of "Transforming Knowledge into Sustainable Practice" will be held in Kuching, Sarawak, Malaysia.</p>
September 2013		
2 – 4 September	Jakarta,	<b><a href="#">UN/Indonesia Workshop on Climate Change</a></b>

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	Indonesia	<b>No website/URL at this stage</b>
<b>24-26 September</b>	Kuala Lumpur	<b>Asia Geospatial Forum 2013</b> <a href="#">Contact</a>
<b>October 2013</b>		
<b>15 – 17 October</b> <b>“Amended”</b>	Coombe Abbey, Warwickshire, UK	<b>1st call for papers</b> for the <b>9th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires</b> . The workshop is organised by the University of Leicester with support from the Laboratory of Forest Management and Remote Sensing, Faculty of Forestry and Natural Environment, Aristotle University of Thessaloniki. <a href="#">Contact</a> <b>EXTENDED deadline for abstract submission is 15 April 2013.</b>
<b>November 2013</b>		
<b>4-8 November</b>	Addis Ababa, Ethiopia	<b>GSDI 14 and AfricaGIS 2013:</b> The GSDI Association, EIS-Africa, the International Geospatial Society, and the United Nations Economic Commission for Africa (UNECA) are pleased to announce a close partnership in offering the joint GSDI 14 World Conference and AfricaGIS 2013 Conference. The theme of the conference is <b>Spatially Enabling Africa in Support of Economic Development and Poverty Reduction.</b>
<b>2014</b>		
	Malaysia	Malaysia will be hosting the (International Federation of Surveyors) FIG Congress in 2014. The decision was taken at the recently concluded FIG Congress 2010 in Sydney, Australia.

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[Global Spatial Data Infrastructure Association](#).

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