

SDI-AP May 2012 Vol. 9, No. 5

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.





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 and access archives of thematic or regional discussion lists please visit.

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#### **Message from the editors**

Welcome to the May issue of the newsletter for the year 2012.

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 <u>send us</u> 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 (<u>Editors</u>), at the <u>Centre for Spatial Data Infrastructures and Land Administration</u>, The University of Melbourne.

#### **Contributions**

Thank you to the following people and organisations for their contributions to this issue: Baek Wonkug for news feeds, Jeremy Shen and Bruce Lan 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.



#### **GSDI News**

#### **Keynote Speakers Announced for GGC 2012 in Quebec**

The joint organizers of Global Geospatial Conference 2012 are delighted to announce Dr. Gilberto Câmara (Brazil), Dr. Prashant Shukle (Canada), Dr. Michael Goodchild (US) and Dr. Abbas Rajabifard (Australia) as featured keynote speakers at the upcoming May 14 – 17 conference.

#### **GSDI 13**

The joint **GSDI World Conference** (GSDI 13), the 14th **GEOIDE Annual Scientific Conference**, the 7th **3DGeoInfo Conference**, and the **Canadian Geomatics Conference 2012** will take place in historic Québec City, Canada at the Québec City Conference Center in the heart of the city. Primary partners in organizing this conference include the GSDI Association and GEOIDE.

#### **GSDI Small Grants Awards for 2011-2012**

The GSDI Association announced in February 2012 the winners of the GSDI Small Grants Awards for 2011-2012.

Under the GSDI Small Grants Program, the GSDI Association, along with partners and participants, allocates resources from the U.S. Federal Geographic Data Committee (FGDC) and the GISCorps of The Urban and Regional Infrastructure Systems Association (URISA) to fund a small grants program to support national or subnational activities that foster partnerships, develop in-country technical capacity, improve data compatibility and access, and increase political support for spatial data infrastructure and earth observations application development.

For more information, including links to the results of some of the former award winners application of the funds, please visit the <u>GSDI Small Grants Program Web site</u>.

#### Calls to Host GSDI 14 and GSDI 15

The Global Spatial Data Infrastructure Association (<a href="http://gsdi.org">http://gsdi.org</a>) supports a major international geospatial conference every twelve to eighteen months. The conference is typically accomplished in affiliation with another regularly held national, regional or global geospatial conference and/or with the support of a major sponsoring organization or agency. The gathering is purposefully moved around and across the globe in order to optimally accomplish the Association's purpose of promoting international cooperation and collaboration in support of local, national and international spatial data infrastructure developments that allow nations to better address social, economic, and environmental issues of pressing importance. The locations and proceedings of the past twelve world conferences may be found at <a href="http://www.gsdi.org/gsdiConferences">http://www.gsdi.org/gsdiConferences</a>.

The thirteenth GSDI World Conference will be held in North America from 14-17 May 2012 in Quebec City Canada (See <a href="http://www.gsdi.org/gsdiconf/gsdi13/">http://www.gsdi.org/gsdiconf/gsdi13/</a>).

Ideally GSDI 14 should be held within the time frame of August through October of 2013 and GSDI 15 would be held approximately 12 to 18 months after that. The GSDI Association is inviting expressions of interest to host either of these upcoming planned conferences. Affiliation with the GSDI World conference can bring international and global attention to a national or regional geospatial conference or Spatial Data Infrastructure initiatives, attract substantial international participation and sponsorship, and increase numbers of attendees overall

Please submit your brief statement of interest on or before 1 May 2012 to mgallant@gsdi.org.

Proponents will have the opportunity to briefly present their statement of interest orally to members of the GSDI Council at its meeting on Sunday 13 May 2012 in Quebec City (a physical spokesperson is not required.)

Council members will vote on the proposals and thereby indicate the preferred options with which the GSDI officers should first negotiate in selecting sites for GSDI 14 and GSDI 15.

#### **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 <a href="http://www.igeoss.org/benefits">http://www.igeoss.org/benefits</a>. For further information, contact <a href="Harlan Onsrud">Harlan Onsrud</a>, Executive Director, GSDI Association.



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

<u>Survey of existing SDI training and education material</u> as part of the project, 'Developing a framework for South African SDI education and training', funded by the GSDI Small Grants Program. See under <u>Training Opportunities</u>



**Opinion** – by now many of our readers will be aware of **Google Glasses** (or Project Glass) with Google releasing a <u>widely-watched video</u> demonstrating the concept and utilizing "augmented reality". One of your editors has concluded the concept is very interesting and impressive but can be summarized as a neat technical solution in desperate need of a problem! Other criticism includes "A Remix of Google's Project Glass Video—Now With Ads" covered by the <u>Atlantic magazine</u>. The remix video is

entitled "ADmented reality" with the remix video artist, Jonathan McIntosh, deciding to create a new version, with a subversive twist. Relevant ads pop up alongside each search, cluttering the user's field of vision with helpful links to Starbucks, Amazon, and McDonalds. McIntosh sourced the ads from actual AdWords search results, "based on the dialog or setting in the original." It's a hilarious, and unnerving, look at what ad-supported augmented reality might look like in the future – the remix video can be viewed at the Atlantic magazine link above. Additionally, Navneet Alang contributed "Google Glasses and the Myth of Augmented Reality" also published in the Atlantic magazine.

Ross Douthat writing in the NY Times also comments on Google Glasses and the fostering of a lack of personal communication.

#### What if You Could See a Building's Impact in 3D Before It's Built?

A proposed apartment complex or a new turn lane can fuel some of the most heated fires at community meetings and City Hall hearings. But for all the information developers and planners are required to share with people living and working near proposed developments, people still tend not to get a very good idea about exactly how a new project will affect them. For the determined NIMBY, an incomplete understanding of a proposed project won't necessarily get in the way of staunch opposition. But for everyone else, a text description and a computer rendering don't always paint a clear enough picture of how a new project would actually change their street or neighborhood.

Augmented reality can help make that picture a little more complete. Through a new technique being developed at the VTT Technical Research Centre of Finland, 3D models of proposed building projects can be displayed on the screens of mobile devices as if they had actually been planted into the environment. As the video from VTT shows, a proposed tower is spliced into the urban environment, offering people in surrounding areas a 3D idea of what such a project would look like.

Source: the Atlantic magazine

#### Surveying & Spatial Sciences Institute (SSSI) - Australia

Incoming President, Gary Maguire has released SSSI's Strategic Plan 2015 for comment. Download the document at this <u>link</u>.

#### Investigation into the Spatial Capability of Australia

The investigation by Dr Vanessa Lawrence CB into the spatial capability of Australia and the Government response to this report are now available (see *link* below).

#### About the investigation into the Spatial Capability of Australia

In early 2010, Mr Drew Clarke, Secretary of the Department of Resources, Energy and Tourism invited Dr Vanessa Lawrence CB, Director General and Chief Executive, Ordnance Survey, Great Britain, to investigate Australia's current spatial capability in order to inform future spatial policy and capability developments.

In her final report Dr Lawrence made 22 recommendations; a number of which outline the policy and frameworks that she believes are necessary to maximise the spatial capability of Australia, taking into consideration Australia's political and economic geography.

Dr Lawrence also recommends an implementation model to deliver these policies, and a governance structure that will ensure that the recommendations can be implemented and built-upon as Australia's spatial capability evolves.

PDF versions of Dr Lawrence's report and the Government response are available here.

Other relevant documents available from the same webpage are:

#### **Other Relevant Initiatives**



Over the period of Dr Lawrence's Investigation, there were a number of other initiatives being led by the Australian Government which also had implications for the Australian spatial community. These initiatives, all of which will also inform the future development of Australia's spatial capability included:

- the Strategic Review of Geoscience Australia (May 2011)
- Spatial reporting requirements in the report on <u>Investing in Australia's Regions</u>

#### **Astrium Supplies National Spatial Data Infrastructure for Serbia**

Astrium, in partnership with IGN France International (IGN-FI), recently finished deploying a complete IT infrastructure comprising topographic and thematic map production lines built around a host structure designed to enable sharing and compilation of a broad spectrum of geospatial data.

Source: Astrium Press Release & V1 Magazine

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#### **SDI Spotlight**

This month the "Spotlight" contributor is Maryam Saydi, a PhD candidate at the University of Melbourne

#### The difficulty in devising an Urban Environment Sustainability indicator by Maryam Saydi

Critical challenges arising from the developing urban environment include the rapidly growing (in both size and complexity) cities coupled with increased immigration from rural areas. The population growth in the cities strains the limited natural resources required to provide a suitable standard of living. Further, the increase of carbon dioxide and other greenhouse gases in the atmosphere is causing climate change on a scale unlikely to be reversed in the short-term future. The increased generation of energy for housing, transportation and infrastructure is central to the problems arising from increased urbanization. Countering the effects of increased energy consumption requires policy makers and urban planners ensuring that the future planning for the urban environment includes sustainability for future generations of the population.

In the Australian state of Victoria, the population of the city of Melbourne (currently 4.1 million) is projected to grow by 1.3 million over the next 20 years and by 3 million over the next 50 years. [See <a href="https://www.theage.com.au/victoria/make-room-state-population-set-to-soar-20120424-1xi6l.html">www.theage.com.au/victoria/make-room-state-population-set-to-soar-20120424-1xi6l.html</a>.] Building and managing such a city in a sustainable manner poses a significant challenge. Climate change further complicates future forecasting. By the year 2030, Melbourne could experience temperatures over 35°C for longer periods of time: currently 9 days per year but expected to increase to 11-13 days. Consequently the issues of increasing population in Melbourne as well as climate change and their effects on residential energy consumption must be considered. Demonstrating the spatial variation in future residential energy consumption in Melbourne is considered an essential tool for policy makers and urban planners.

Establishing an approach and a platform for defining and implementing energy sustainability policy, my research is directed at devising a spatial energy indicator for Melbourne at the Postal Area spatial level to assist management of the urban environment. Using such an indicator converts large amounts of urban environment data into simple, timely results and thus provide an effective means of incorporating data regarding people, housing, life style, and dwelling structure and their spatial distribution suburb by suburb into residential energy consumption management decisions. In my current research I am seeking to devise a spatial energy indicator by assessing the effect of people's socio-economic condition, dwelling structure and land use distribution for each Postal Area (POA) of Victoria using statistical methods.

Defining the energy indicator is not an easy task. Many intermediate steps are necessary to develop such an indicator; of which the first and foremost challenge is data collection. This includes spatial and non-spatial data availability, compatibility between different data sources and the various geographical scales, and issues of access to data. For example, there is no data available with regard to detailed information concerning dwelling structures such as house size, number of stories, roof and wall material, etc. in the different Postal Areas (POA) of Melbourne. In collecting this data, I settled upon some random dwelling samples and gathered the detailed data of dwellings structure using Google Map and Google Earth. In other cases, when the data was available (such as energy consumption per POA), there still remained obstacles to accessing the data sources due to some confidentiality rules.



Preparation of and combining energy consumption data (Dependent variable) to socio-economic, dwelling structure, and land-use data (Independent variables) is followed by the data collection process. To discover the determinants of household energy consumption, correlation and linear Multiple Regression were performed on the prepared data.

The result of the correlation analysis shows that there is either no or weak correlation between household energy consumption and land-use data. Only residential and business land-use have significant correlation with energy consumption per household. In the socio-economic dataset, those familes with no children have the highest negative correlation with energy consumption per household. On the other hand, more highly educated members of the community have the highest positive relationship with energy consumption. Thus large family size, high income, and managerial or professional occupation are among the socio-economic characteristics which positively correlated with energy usage for each family. Conversely small family size, low income or unemployment negatively correlated to family energy usage. It would seem that affluent families tend to use more electrical appliances and, as they can more afford energy usage costs, they consume more. The proportion of males and females in a POA as well as the age group does not appear to affect household energy usage significantly.

Generally, the result of correlation analysis in the dwelling structure group of data shows that the variables of dwelling structure have a higher correlation with energy usage per household; however, there exist some significant relationships between the variables of these two groups; dwellings with swimming pools have the highest positive correlation with energy usage per household. Large dwelling size, separate houses, tile roof material, large garden size, high plant garden style and building ownership are among the most effective building characteristics increasing households' energy consumption. It seems that those affluent families which have larger houses have a tendency to use more energy as they need it for cooling or heating their house or using different electronic appliances at home. On the other hand, attached building style, small houses, small gardens, rented ownership are inversely related to household energy consumption.

The table shows the results of linear multiple regression analysis on all independent variables of variations in consumption of energy in households.

		Coefficients				
	Outcome Variables	Outcome Variables  Un-standardized  Coefficients		Standardized Coefficients	T-Statistics	Sig.
		В	Std. Error	Beta		
	(Constant)	83.806	19.857		4.221	.000
1	Dwelling Size (Large)	.220	.075	.299	2.954	.007
2	Age group between 25 to 60 years old	339	.319	086	-1.061	.298
3	One-parent family	-2.186	.350	459	-6.245	.000
4	Education Type (Secondary School)	1.271	.275	.504	4.620	.000

From the table it can be seen that except for the Age group (25-60 years old) all other explanatory variables are statistically significant. The percentage of people with secondary school education has the highest positive correlation with energy consumption per household. This may possibly be that the students use many electronic appliances for studying or gaming at home. Large size dwellings are also positively associated with household energy usage. This may also be explained by the use of more electronic appliances for heating and cooling inside the dwelling or using more devices. On the other hand, when the percentage of one-parent families increases in a Postal Area, energy usage per family decreases due to smaller sized families.

From all the steps to make the spatial energy indicator, it is perceived that larger dwellings and high incomes are the most effective indicators of rising energy consumption; however, this should be examined using more variables. For further research I propose verifying the accuracy and sensitivity of the indicator.

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



#### **GIS Tools, Software, Data**

#### Trimble to Enhance its Office-to-Field Platform with the Acquisition of Google's SketchUp

On April 26, 2012, Trimble announced it has entered into a definitive agreement to acquire SketchUp® from Google. SketchUp is one of the most popular 3D modeling tools in the world. As part of the SketchUp platform, Trimble will also partner with Google on running and developing SketchUp's 3D Warehouse, an online repository where users can find, share, store and collaborate on 3D models.

Source: Trimble press release

See also Matt Ball's observations in Asian Surveying & Mapping



Esri Australia partnered with Easter classic to create a Yacht Tracker map, which will map competitors' progress at the 2012 QantasLink Brisbane to Gladstone Yacht Race.

Source: ESRI Australia and GeoSpatial World

#### Results of the OGC international business value survey

#### Penguins from Space: A New Satellite Census Doubles the Known Population of Emperors

A group of geographers and ecologists from three continents has taken an unprecedented look at Antarctica's emperor penguins. Using very high resolution (VHR) images from satellites 450 kilometers above Earth, the team has come up with the first total population count for an entire species. With a whopping 595,000 penguins, they found nearly twice as many emperor penguins as did previous studies, and they counted 46 colonies, up from the earlier total of 38.

Source: Scientific American

[Editors' note: "Penguins from Space" is NOT a sequel from the makers of the movie "Dogs in Space".]

#### New Micro Laser Adds Precise Measurement to Handhelds

UK-based Measurement Devices Ltd. (MDL) has developed a tiny eye-safe micro laser for the mobile phone market that could revolutionize field data collection. The Micro Laser Module can make hundreds of measurement a second for objects within a 120-meter radius. Now that the hardware has been developed it is being marketed to original equipment manufacturers for the development of software and interfaces for different applications. MDL was started in 1983 by a former Yorkshire mines surveyor, and the company has been hard at work to miniaturize and reduce the power requirements of laser measurement technology since that time. Source: Asian Surveying & Mapping

#### Study Sheds Light on How Birds Navigate by Magnetic Field

Birds are famously good navigators. Some migrate thousands of miles, flying day and night, even when the stars are obscured. And for decades, scientists have known that one navigational skill they employ is an ability to detect variations in the earth's magnetic field.

Now, two researchers at Baylor College of Medicine, Le-Qing Wu and David Dickman,

have solved a central part of that puzzle, identifying cells in a pigeon's brain that record detailed information on the earth's magnetic field, a kind of biological compass.

Source: New York Times and the American Scientist

See also <u>Magnetosensitive GPS cells in the pigeon brain</u> (The Guardian: Science) See also <u>Pigeons Aren't Led By Their Beaks? New Study Ruffles Some Feathers</u>

A new study casts doubt on theories that pigeons navigate using iron-rich nerve cells in their beaks.

Source: International Business Times









#### **News from abroad**

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

#### United States - Who owns lands under rivers?

Who owns the lands beneath America's rivers? Since the founding of the republic it has been understood that,



pursuant to the equal-footing doctrine, the states own lands under navigable rivers, while the riparian owners have title to lands under non-navigable rivers. Thus, title depends on whether a river is navigable. Since before Montana's statehood in 1889, it has been settled that, for the purpose of determining state title to submerged lands, the river in question must have been navigable in fact or susceptible to navigation at the time of statehood.

Source: The National Law Journal

#### South Africa 2011 satellite imagery mosaic now available

The Earth Observation division of the <u>South African National Space Agency</u> (SANSA) launched their 2011 edition of its mosaic of satellite imagery of the whole of South Africa. The data consisting of more than 1000 images was collected from 24 January 24 to 20 December 2011 with the Spot 5 earth observation satellite. The imagery can be used for various purposes ranging from housing and urban planning to agricultural observation to environmental monitoring. The disks with the images are being sent to each South African province; others go to the Presidency, government departments and government agencies such as South African National Parks. Spot 5 was launched in 2002 and is operated by European space company Astrium. View the SANSA Earth Observation online catalogue.

#### **Nighttime Observations Offer Urban Insight**

Recently, the European Space Agency designed and developed, along with with Dutch company Cosine, a motorized tripod called NightPod to take nighttime images of the Earth from the International Space Station. Prior to this device, the speed of the space station made picture taking difficult due to the speed of the Space Station and the low shutter speeds required to capture light at night. With this capability, we're reminded of the utility of nighttime images to inform about human settlement, and mapping land cover.

Source: Asian Surveying & Mapping

#### **Evaluating Potential Rock Slides**

The Åknes /Tafjord region of western Norway is a UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage site and a popular tourist destination. Numerous cruise ships enter through narrow openings along the rugged coastlines into steep, fingerlike fjord complexes--miles and miles of pristine beauty. Located in the Stranda municipality along the Åknes reach of a much larger fjord complex, the region is also home to many small villages and farms.

Evidence of rockslides in ancient and modern history is readily visible along the fjords. The most notable example happened in 1934 near the far end of the Tafjord arm of the same fjord complex; a rock slide much the same size as the potential Åknes slide created a "tsunami" wave resulting in the deaths of 40 local residents and property damage representing tens of millions in adjusted dollars.

Source: The American Surveyor

#### Tracking Diseases Using Google Maps and Cell Phones

Researchers at UCLA have taken the human out of the equation as much as possible and developed a digital "universal" reader for all rapid diagnostic tests, or RDTs, that requires no translation of results. The reader transmit these results wirelessly to a server for processing, storage, and mapping via Google Maps to track the spread of specific conditions and diseases globally over time.

Source: Vector1 Media & CNet

#### **Green Cities Are Happy Cities**

Lower carbon emissions are linked to more knowledge-based, creative economies. The touchstones of such economies are higher levels of human capital (college grads), larger concentrations of high-tech industry, and greater levels of creative class workforces. All three are correlated with lower levels of emissions according to



our analysis. Less emissions and a cleaner environment translates into a better quality of life which provides an additional edge in attracting talent and business.

Not surprisingly, residents of greener, lower emitting metros report higher levels of happiness.

Source: The Atlantic

#### **Geolocation Data To Go Small Scale**

The U.S. Army is working to compress large amounts of geospatial data into an amount that is manageable on a handheld device. Imagery from the GeoGlobe database currently seeing use in Afghanistan soon may become available in PDF format, placing crucial imagery and information directly into the warfighter's hands. Source: Vector1 Media & AFCEA.org

#### Calling on Crowds to Participate, Collect and Map

The mainstream term of crowdsourcing is defined as, "the act of sharing a job or function that was once the domain of a specific agent with distributed masses through an open call." Michael Goodchild coined the term volunteered geographic information (VGI) as, "harnessing of tools to create, assemble, and disseminate geographic data provided voluntarily by individuals." And, given the proliferation of smartphones as sensors, participatory sensing should also be considered as it, "tasks everyday mobile devices to form interactive networks that enable public and professional users to gather, analyze and share local knowledge." Source: Asian Surveying & Mapping

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#### **Articles**

#### The End of Sprawl?

Recall how quickly the decline of the centre city to rise of the suburbs occurred in the 1960s and 1970s. We may well be on the verge of any even more accelerated and abrupt shift back to the city today.

Source: The Atlantic magazine

See also USA Today

#### **Disruption is Good When Innovating** by Joe Croser

If you work in the high-tech space, or if you are plugged into technology trends, you will be well aware of disruptive innovations. But do you know what a disruptive innovation really is? Clay Christensen, the author of the 'Innovator's Dilemma' defines a disruptive innovation quite clearly as; 'The transformation of a product that has historically been so expensive and complicated that only a few people with a lot of money and a lot of skill could access.' He continues, 'A disruptive innovation makes it so much more affordable or usable that a larger group of people have access to it.'

An obvious example of disruptive innovation is the PC which all but ended the useful life of mainframe computers. The mainframe computer cost several million dollars to buy and took years to train people to use which meant that the largest corporations and the largest universities could have just one. In contrast, the PC was highly affordable and easy to use leading to rapid and broad adoption. Today there are around two billion computers in offices, universities, homes, and in people's pockets as they go about their lives.

Source: LiDAR News

#### SnowSTAR-2012: Questionable Monuments and Widespread Cratering by Matthew Sturm

- Setting up a precise GPS control network that will allow the aircraft to navigate with 10-cm positioning precision,
- Operating our ground-based LiDAR to produce small "bull's eyes" where we will know the snow surface topography to centimeter accuracy, and
- Measuring snow depth and snow water equivalent (SWE) along the planned flight path without trashing too much snow before the aircraft flies.

Source: Scientific American blog

### <u>Using Geographic Information Systems (GIS) For Spatial Planning and Environmental Management in India: Critical Considerations</u>

International Journal of Applied Science and Technology Vol. 2 No. 2; February 2012



Abstract: Geographic Information Systems (GIS) are computer-based tools used to collect, store, manipulate and display spatially-referenced information. They are used to support decision-making in a wide variety of contexts, including spatial planning and environmental management. Because the process of GIS production, from software development to visualization of GIS output, is characterized by political, economic and social motivations, it is important that GIS practitioners are aware of issues such as access to data and the political economy of information, and the nature of GIS epistemologies vis-à-vis multiple coexisting perceptions of reality. Lack of such appreciation can lead to social and spatial marginalization of communities. Use of GIS in a research program for environmental management of the Cooum River in Chennai, and in support of participatory processes for managing environment and health in slums are used to demonstrate appropriate applications of GIS in India. Internet-distributed GIS as a potential avenue to address issues of public access to data is also considered.

**Keywords:** geographic information systems; GIS; participatory GIS; PGIS; Critical GIS; GIS and society; public participation; Chennai, India; GIS and development

#### Modern 3D Laser Scanning Virtually Restores an Ancient Roman Sculpture by Michael Raphael

"This article explains how we used "other" 3D equipment from one of the more common OEMs in the general laser scanning business - FARO Technologies, to capture the intricate geometry of an ancient Roman marble sculpture. Sure, you've read about us and others 3D scanning art and sculpture - modern and historic. But not many 3D projects involve teams of international experts to collaboratively create, review, and 'virtually repair' ancient art with this level of technical and academic precision. Read about the project and view the graphic images linked below to see specifically what I mean."



Source: LiDAR News

Geospatial information for the blind by F Mustofa, S Eka Wati, Turmudi, Setiyani, S Murdoko

The need of any information, including geospatial information, is one of the human rights that must be fulfilled by governments and related parties. Spatial information, commonly presented on digital maps or atlas, paper sheets or books, is proposed for people with normal vision. For blind people, a special tool is required. The tool is represented by tactile map which helps them to recognise the map, the symbol upon it and the explanation depicted, through Braille word.



Tactile map based on road infrastructure is an interesting theme for blind people since it will give vital knowledge on how to reach a certain area. Blind people usually identify the environment by listening to some conversations or information given by the other people. They have not yet understood how to get to a particular area and its accessibility. Therefore, this research is intended to understand the ability of blind people in recognising road infrastructure in several big islands and among cities in Indonesia.

The result of the research shows that blind people are able to identify the symbols of road infrastructure. Further, not only are they able to recognise, but also to understand spatial dimension among cities in Indonesia.

Source: GeoSpatial World

#### On-demand Base Maps on the Web generalized according to User Profiles

Theodor Foerster, Jantien Stoter and Peter van Oosterom International Journal of Geographical Information Science Volume 26, Issue 1, 2012

Abstract: Thematic content in the form of geodata is becoming increasingly available on the web. However, adequate base map information to support appropriate communication of the thematic content is not available in many cases. This base map information might be served through topographic databases available on the web and optimized by means of automated generalization. This article describes an approach based on user profiles, which formally captures the user requirements (preferences) towards the base map and deploys those profiles in a web-based architecture to generate on-demand maps. Those user profiles, which may differ per user, drive the generalization process and produce base maps on-demand by taking into account the user requirements as well as the thematic content. The research in this article specifically focuses on the technological environment that generates on-demand base maps incorporating four basic concepts in the user profile: 1) topology awareness between the base map and the thematic content, 2) user-specific base map information at a non uniform scale to improve the communication of the thematic content, 3) the map specification and 4) inheritance of user profiles. Both existing and new techniques are explored to realize the



environment. The approach is evaluated by applying it to a project in the Netherlands dedicated to disseminating physical planning maps through the Web.

**Keywords:** Automated generalization, user profiles, web mapping, on-demand base maps.

New Technology Allows Better Extreme Weather Forecasts by Jane Lubchenco and Jack Hayes Tools for forecasting extreme weather have advanced in recent decades, but researchers and engineers at the National Oceanic and Atmospheric Administration are working to enhance radars, satellites and supercomputers to further lengthen warning times for tornadoes and thunderstorms and to better determine hurricane intensity and forecast floods. If the efforts succeed, a decade from now residents will get an hour's warning about a severe tornado, for example, giving them plenty of time to absorb the news, gather family and take shelter.

Source: Scientific American

#### **The Surveys of David Douglas**

When Scottish naturalist David Douglas returned to London from North America in the late fall of 1827, he was received with remarkable acclaim for the relatively unschooled son of a village stonemason. Working as a collector for the London Horticultural Society, he had traveled widely over the fertile grounds of the Pacific Northwest, and hundreds of the seeds he had sent back--including the tree that would eventually bear his name--had been successfully sprouted in the Society gardens. Within the next few months, Douglas wrote or contributed to more than a dozen scientific papers on subjects ranging from currant bushes to California condors, signed a book contract with a leading publisher, and was lionized by what was often a very strict class society.

Source: The American Surveyor

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

WORLD

http://itunes.apple.com/us/app/barefoot-world-atlas/id489221652?mt=8
Barefoot Books World Atlas (\$8) is a kind of digital globe for children, giving them easy access to a simplified cartoon overview of the whole world.

From the orbital view (for want of a better word), you see the globe

peppered with hundreds of colorful icons. Spin the globe and zoom in. The little icons grow and become tappable controls. Each one reveals a snippet of information in text and audio form (read aloud by the UK's favorite TV geographer (yes, we have those), Nick Crane). There's also a photo to look at for each

http://www.cultofmac.com/156194/barefoot-atlas-tour-the-world-with-your-kids-before-bedtime-review/

<u>Call for papers:</u> Computer Environment and Urban Systems (CEUS) special issue on "Spatial Information and Urban Policies: Might or Hype?"

Deadline for submission of manuscripts: May 15, 2012

#### The February 2012 issue of SSSI's GeoMessage is now available

fact, which is often much more informative than the icon was to start with.

<u>The Geospatial Desktop — Open Source GIS & Mapping</u>, authored by Gary Sherman, is <u>now available on the Kindle</u> platform for download and at a discount to the print book.

Open source GIS and mapping application are in increasing demand. Created specifically to support consultants and academics needing more material on the subject, this book gives an overview of the desktop software that is currently available and dives deeply into particular cases — including scripting, analysis and day-to-day usage of products such as Quantum GIS and GRASS GIS. This is an introduction to products as well as concepts, so is well suited for beginner GIS students and intermediate users who want to expand their portfolio of options.

#### **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

#### 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 - December, 2011 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.

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 January 2012 issue has been posted:

LiDAR News, Vol 2, No 3 (February 2012) and LiDAR News, Vol 2, No 4 (Mid-February 2012)

Think Quarterly – Google's new on-line magazine

**Coordinates** monthly magazine (February 2012)

**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 (March 28)

NASA's Own Supercut of Amazing Footage of Earth From Space
Courtesy of NASA
How Astronauts Shoot Those Time-Lapse Videos From Space
Courtesy of NASA

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#### **Just for Fun!**

#### The Undependable Global Positioning System

Warning: Do not attempt to use this device to travel from one location to another, as this device has no love for destination. / We are inclined toward interstitial points for which destination is immaterial. / Failure to take an interest in your surroundings during the course of a journey can result in disappointment, tedium, and irritation. / This place where you are now situated should

serve as substitute for places you do not yet inhabit, whether exotic or routine. / You assume total responsibility



for becoming confused or disoriented. / The manufacturers are indemnified against all legal remedies, having constituted themselves as a duly registered *limited liability corporation*. / The manufacturers too are lost. /// Source: New Yorker blog

<u>PICTURES of a scantily clad woman taken in an outer-Melbourne suburb have led to the arrest of a man who allegedly hacked law enforcement and government websites in the United States.</u>
From the news report:

According to the FBI, data taken from the picture showed it was taken by an iPhone. GPS co-ordinates taken from the photo also pinpointed the exact Wantirna South street and house where it was taken. [Editors' note – as a family-friendly newsletter we have refrained from publishing the pictures which led to the apprehension of the alleged hacker – prurient readers should follow the URL link.] Source: The Age

How Bolivia Lost Its Hat from the Borderlines blog from the New York Times

North Carolina – South Carolina border - Untangling a Border Could Leave a Mess for Some Source: The New York Times

#### One Island, Two Countries

Apart from a dwindling seal colony and the automated lighthouse towering over it, nothing seems remotely remarkable about Market Island, a tiny skerry in the strait separating the Gulf of Bothnia from the Baltic Sea. But Market, which is Swedish for "boundary marker" (not "market," as you might assume), is an uninhabited sea-rock with a difference.

It not only marks the meeting of two seas, but the meeting of Sweden and Finland. And it does so in a weird and unique way. The international border on either side of the island is straight enough, but on the island itself, the boundary bends no less than eight times, achieving a bizarre symmetry. Although Market is sometimes said to be the smallest sea island divided by an international border, it makes a stronger case as having the strangest insular border in the world.



From the **Borderlines blog from the New York Times** 

#### Satellites photograph massive parade in North Korea



In North Korea, the choreography can be part of the geography. The country is famous for organising crowds of thousands of people using coloured cards to spell out political slogans and images in stadiums or large squares, and the gathering last week to celebrate the 100th birthday of national founder Kim II Sung was no different.

This time, however, the spelled out message in a central square in the capital of Pyongyang was big enough to be visible from space.

An April 15 image of a celebration taken by a satellite and distributed by DigitalGlobe shows people in red and gold clothing gathered in Kim II Sung

Square and spelling out the word "glory" in Korean.

Source: MSN News

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### **Training Opportunities**

#### Request for information about SDI education and training material

Dear colleague,

we are conducting a survey of existing SDI training and education material as part of the project, 'Developing a framework for South African SDI education and training', funded by the GSDI Small Grants Program. We are looking for material that can be used for SDI education and training, as well as material to inform the development of the framework. We would appreciate if you could send information about relevant material to <a href="Victoria Rautenbach">Victoria Rautenbach</a>, using the attributes below to describe the material. The results of the survey will be <a href="Back to contents">Back to contents</a>



published on the <u>project page</u>. Title: <title of the material>

Author(s)/Publisher: <author names and/or publisher>

URL: <URL for the material or information about the material>

Access: <open? free? cost? copyright? >

Description: <description of the material (textbook, notes, course, presentation)>

Contact: <name and email address that can be contacted for more information about the material>

Your input will be highly appreciated, if possible, by 4 May 2012.

For more information, refer to the project page or contact Victoria Rautenbach or Serena Coetzee.

#### Third Open Source GIS Summer School, Girona, Spain

The GIS and Remote Sensing Centre (University of Girona, Spain), Nottingham Geospatial Institute (University of Nottingham, UK) and OpenGeo are pleased to announce the Third Open Source GIS Summer School, **July 9-13th, 2012** at Girona, Spain. Building on the success of previous editions, this year's program will be focused on the development and creation of Open Web Mapping Services and Web applications.

The University of Nottingham will be strongly supporting this excellent initiative. Jeremy Morley (Lecturer and a theme leader at the NGI) will be contributing the Nottingham components for the Summer School. The course has been designed and will be conducted on a GNU/Linux operating system based on the use of the OSGeo-Live DVD.

All course materials produced for the Summer School will be made available through the <u>ELOGeo platform</u> for the benefit of the wider community. <u>More details</u>.

#### **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 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: <a href="http://gvsig-training.com/">http://gvsig-training.com/</a>
- gvSIG Certifications: <a href="http://www.gvsig.com/services/certification">http://www.gvsig.com/services/certification</a>



### GIS Courses by Distance Education NSW Riverina Tafe

The courses listed below are all full Geographic Information Systems courses which can be studied over a number of semesters by distance study pathways.

<u>Certificate III in Spatial Information Services (GIS)</u> Certificate IV in Spatial Information Services (GIS)

Diploma of Spatial Information Services (GIS)

Source: NSW River

#### Participatory Spatial Information Management and Communication Training Kit now available on-line

Co-published by CTA and IFAD in English and Spanish, the Training Kit is a unique product that can be tailored to meet user needs, ensuring that employees get the best training available on Participatory Spatial Information Management and Communication.

The online version was launched at the beginning of March 2011. The DVD version was launched in December 2010. The Training Kit contains 15 Modules, each presented through a series of Units. Modules cover the entire spectrum of good developmental practice – from mobilising communities to developing a communication strategy based on the outcome of participatory mapping activities. The Modules touch on topics such as the fundamentals of training, ethics and community groundwork and processes as well as the more technical low-, mid- and high-tech participatory mapping methods.

Users decide what they want to cover and when. The product has been developed using the Multimedia Training Kit (MMTK) approach – which allows you to pick and choose those Modules, Units and components that best suit your particular requirements and develop a curriculum to suit your specific needs.

**Publishers:** Technical Centre for Agricultural and Rural Co-operation ACP-EU (CTA), Wageningen, The Netherlands and International Fund for Agricultural Development (IFAD), Rome, Italy

Source: The Centre for Agricultural and Rural Cooperation

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#### **Funding Opportunities, Awards, Grants**

#### **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.

#### **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 Back to contents



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.

#### **GMES Masters 2012 call for proposals**

The GMES Masters rewards on an annual basis the best ideas for services, business cases and applications based on GMES data, with the aim to foster product development and entrepreneurship in Europe. Initiated by the European Space Agency (ESA), the Bavarian Ministry of Economy, the German Aerospace Center (DLR) and T-Systems, and supported by the European Commission and European Space Imaging GmbH, the GMES Masters 2012 will call for proposals between 1 June and 16 September 2012 in six categories.

#### **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 <a href="http://www.sla.gov.sg/OneMapChallenge">http://www.sla.gov.sg/OneMapChallenge</a> to learn more about OneMap Challenge and check out the OneMap Facebook page at <a href="http://www.sla.gov.sg/OneMapChallenge">www.facebook.com/OneMap</a>.

Source: Geospatial World and SLA press release

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#### **Employment Opportunities**

#### **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.



#### GIS Job Board Launches New Website: 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

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#### **Conference Proceedings**

#### **Malaysia Geospatial Forum 2012**

Day 1 (March 6), Day 2 (March 7), Plenary showcases g-tech in nation building

#### Possibility or a dream? Spatially Enabled Geovernment and Societies

Geospatial experts from different background and part of the world share their views on Spatially Enabled Government and Society (SEGS) at **UNRCC-PCGIAP International Symposium** organized by Department of Surveying and Mapping Malaysia during **15 – 16 February at Kuala Lumpur, Malaysia**. They highlight pertinent issues, challenges and suggest way forward to achieve the goal

#### **GNSS vulnerabilities: Testing the Truth**

European Navigation Conference ENC GNSS 2011, held in London in November and December 2011

This paper is based on a presentation given to the European Navigation Conference ENC GNSS 2011, held in London in November 2011. The authors present an overview of threats and vulnerabilities of GNSS systems in general and with a focus at application level across a spectrum of domains. They highlight some of the important countermeasures that are already available on the market, but which are not ubiquitously used.

#### Timor Leste (East Timor) - environmental data review workshop

The 6th of March as part of the Norwegian Petroleum Assistance Program together with DNMA I contributed to a workshop to be held at the Arbiru Hotel in Dili, Timor Leste. The intended outcome was to contribute to a process for establishing better handling of environmental data. The workshop was opened by his Excellency Sr. Abilio de Deus de Jesus Lima, State Secretary for the Environment.

#### Iraq Spatial Data Infrastructure workshop completed

In mid-February 2012, over 25 persons representing 13 national and regional government organizations assembled in Erbil in the north of Iraq for an intensive three-day exchange to explore concepts and ideas towards the establishment of a National Spatial Data Infrastructure for Iraq.

The workshop was conducted under the auspices of the Prime Minister Advisory Committee (PMAC), and supported by the United States Geologic Survey (USGS).

Staff from the GPC Group facilitated the workshop, bringing experience and insights regarding the implementation of GIS federations and Spatial Data Infrastructure (SDI) in other countries and regions around the world.

Open Planet 5, the magazine published for the <u>International gvSIG Conference</u> is now available in electronic format

#### National Geomatic Plan in Gabon: results of pilot projects presented

IGN France International presented the main results of the work conducted between April and December, 2011 at the occasion of a final seminar. This seminar was held on December 6th, 2011 in Libreville and brought together around 60 representatives, most of whom were general managers and permanent secretaries from the Back to contents



main ministries, all in the presence of Emmanuel Issozet, Minister of the Budget and Madame Yolande Nyonda, Permanent Secretary of the Budget.

Phase pilote du PNG Gabon : Promesses tenues

NGP Gabon: IGN France International presented the results of the pilot projects during a final seminar

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#### **Conferences, Events**

For upcoming events of global or major international interest, please visit the <u>upcoming conference list</u> 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. The 9th conference will be held in Morocco in October 2012.

Date	Location	Event
May 2012		
2-3 May	Bishkek, Kyrgyz Republic	Annual Central Asia GIS Conference - GISCA 2012 "GEOINFORMATION FOR LAND AND RESOURCE MANAGEMENT"
7-9 May	Rio de Janeiro, BRAZIL	4th International Conference on GEographic Object Based Image Analysis 2012 – GEOBIA 2012
14-17 May	Quebec City, Canada	2012 Joint World Conference Global Geospatial Conference 2012 and GSDI 13 and Canadian Geomatics Conference (CCC)  & there's more - 14th GEOIDE Annual Scientific Conference & there's even more - 7th 3D GeoInfo Conference hosted by GEOIDE Network GSDI 13 invites presentations/papers covering the full range of practice, development and research experiences that advance the practice and theory of spatial data infrastructure development and spatial enablement of society. GSDI 13 will support three primary forms of publication: (1) a normal conference proceedings with abstracts and full articles (non-refereed and refereed), published on a USB drive or CD and archived on the web, (2) a pre-conference published book of fully refereed articles titled "Spatially Enabling Government, Industry and Citizens: Research and Development Perspectives" to be distributed to all conference participants and archived on the web, and (3) a post-conference special edition of the International Journal of Spatial Data Infrastructures Research (IJSDIR) with full articles selected from the proceedings and then fully refereed and revised after the conference. In addition, two separate calls arising from the joint conference are being issued for chapter submissions to two additional books: (1) "The Added Value of Scientific Networking: GEOIDE Network Experiences" to be distributed to all conference participants (Call for chapters at <a href="http://www.geoide.ulaval.ca/call-for-chapters.aspx">http://www.geoide.ulaval.ca/call-for-chapters.aspx</a> ), and (2) "3DGeo Info Conference Proceedings" (Springer) to be mailed after the conference to all 3DGeo Conference participants which will be a single track on Wednesday and Thursday (Call at



		http://www.coloresinfo0040.ulevel.co/0.com/14.40\
		http://www.3dgeoinfo2012.ulaval.ca/?page_id=48).  IMPORTANT LINKS
		Conference Website: http://www.gsdi.org/gsdi13
		Past GSDI World Conference
		Proceedings:http://www.gsdi.org/gsdiConferences
		Past open access Books affiliated with the
		conference:http://www.gsdi.org/openaccessbooks
		Other Important
		Dates:http://www.gsdi.org/gsdiconf/gsdi13/dates.html
16-17 May	Quebec,	7th International Conference on 3D GeoInformation
	CANADA	
18 May	Quebec,	International Workshop on Geospatial Data Quality
	CANADA	Legal, ethical and technical aspects to be held from 8:30 AM to
		3:30 PM on Friday, 18 May 2012, in the Quebec City Convention
		Centre, Room 205C, immediately following the Global Geospatial
		Conference 2012, 14-17 May, at the same venue.
		The workshop will start by a keynote address from Kevin Pomfret,
		Executive Director of the Centre for Spatial Law and Policy,
		followed by talks presenting the main research results coming from
		the project IV-23 of GEOIDE network.
		The workshop will finish with a panel discussion on "Volunteered geographic information (VGI): Legal and Ethics issues?" facilitated
		by Roger Longhorn and involving panellists David Coleman,
		Michael Goodchild, Harlan Onsrud and Teresa Scassa.
		Visit the workshop website for more details and to register.
		Fees (including lunch and refreshment breaks):
		Regular registration: 130 \$CAD
		Student: 75 \$CAD
		Participant to the Global Geospatial conference 2012: 90 \$CAD
		Workshop size is limited to 90 participants - so if interested,
		register today! (You can pay online with PayPal.)
		If you have any question, feel free to contact Tania Roy, project
		coordinator.
21-3 May	Prague,	FOSS4G-CEE & Geoinformatics
	Czech Republic	Important dates:
		1.1.2012 Call for papers & workshops 1.2.2012 Workshop submission deadline
		1.3.2012 Workshop submission deadline 1.3.2012 Papers submission deadline
		15.2.2012 Confirmation of accepted workshops
		15.3.2012 Confirmation of accepted workshops
		1.4.2012 Early bird registration deadline
23-4 May	Taza, Morocco	International conference of GIS users, Taza GIS-Days 2012"
,	,	The Taza-GIS-Days symposium is being organized by the
		Laboratory Natural Ressources and Environment of the
		Polydisciplinary Faculty of Taza in collaboration with the Sidi
		Mohamed Ben Abdellah University, Fez. Participants will have the
		opportunity to learn about GIS through a series of presentations,
		exhibitions and practical exercises presented by a distinguished
		group of professionals.
		Topics:
		Development and Planning, Archaeology and History, Environment,
		Water Resources Management, Remote sensing, Photogrammetry,
		GPS, Natural Hazards, Mapping and Geology, Web application, GIS and Open Sources, Geolocation and Network Interoperability
		and Standards OGC
		Deadline for abstracts submission: February 29, 2012
		Contact
June 2012		
June 2012		



3-5 June	Kuala Terengganu, Malaysia	The International Conference on Informatics & Applications (ICIA2012)  The proposed conference on the above theme will be held at University Sultan Zainal Abidin, Kuala Terengganu, Malaysia, From June 3-5, 2012 which aims to enable researchers build connections between different digital applications. Important Dates  ===================================
		Registration: May 2, 2012
4-7 June	Las Vegas	Hexagon 2012 conference.
8-11 June	Shanghai, China	2nd International Workshop on Earth Observation and Remote Sensing Applications (EORSA 2012)  Call for Papers  Following the first EORSA conference in Beijing in 2008, the second workshop (EORSA2012) will be held in Shanghai, China, on June 8-11, 2012. This event is jointly organized by Tongji University, Peking University, and Nanjing University, with technical sponsorship from?IEEE Geoscience and Remote Sensing Society and International Society for Photogrammetry and Remote Sensing. Timetable:  Abstract submission due - March 15, 2012  Notification of acceptance - March 30, 2012  Full paper submission - May 15, 2012  Pre-conference registration due - April 15, 2012  Pre-conference workshops - June 8, 2012  Conference: June 9-11, 2012  Abstract Submission:  Please submit your abstract through the following web site: https://www.easychair.org/conferences/?conf=eorsa2012  An abstract should be between 400 and 600 words in English, and be saved in Microsoft Word format. Please include title, key words (up to five), full name, affiliation, and contact details (e-mail, phone, fax, and regular mailing address). Please also indicate your preference for oral or poster presentation.  For more information about the workshop, visit the website
15-17 June	Hong Kong	20th International Conference on GeoInformatics (GeoInformatics 2012) Abstract/Paper submission deadline: 15 November 2011 In response to the increasing concerns on global changes and natural disasters, the 2012 conference theme is "Global Change, Adaptation and Risk Management". Earthquakes, floods, droughts, pollutions and many other natural and man-made disasters are severe threats to the mankind. Geoinformatic technologies shall play an essential roles to mitigate damages of the disasters. This conference will provide an excellent opportunity for professionals and students in the geographic information science area to exchange innovative ideas, discover cutting-edge technologies, and present inspiring applications. Meanwhile, 2012 will be the 20th Anniversary of the International Association of Chinese Professionals in Geographic Information Sciences (CPGIS, <a href="http://cpgis.org/">http://cpgis.org/</a> ) and its Annual Conference (the GeoInformatics series), the organizing committee cordially invite geoinformatics professionals and scholars all around the world, review and celebrate our accomplishments and to develop our vision for the next 20 years.



10.20 I	Caluadan da	IIO:tica Taskuslavias and Diaminall OTD 40
18-20 June	Salvador de	"Cities, Technologies and Planning" - CTP 12
	Bahia, Brasil	<http: geog_an_mod_10="" index.<="" murgante="" td="" utenti="" www.unibas.it=""></http:>
		html>
		in conjunction with
		The 2012 International Conference on Computational
		Science and its Applications (ICCSA 2012)*
21-3 June	Yokohama,	Geospatial Expo 2012
	Japan	Contact
25-7 June	Taipei, Taiwan	International Conference on Earth Observations and Societal
		Impacts (ICEO-SI)
		The ICEO-SI 2012 Meeting will advance the understanding of earth
		observations and societal impacts from the regional to the global
		levels. Through the promotion and construction of the Global Earth
		Observation System (GEOS), the conference will namely address
		the following topics:
		Ecosystems – Biodiversity – Water – Disasters – Energy – Health –
		Weather – Climate - Agriculture
25-30 June	Istanbul, Turkey	World GIS Summit
		"The World GIS Summit" has been postponed to June 25-30,
		2012."
July 2012		
8-11 July	Brisbane,	2012 Brisbane International Geospatial Forum
Ž	Australia	
16-20 July	Universiti	AGSE 2012 - Applied Geoinformatics for Society and
,	Teknologi	Environment
"NEW"	Malaysia,	Conference Theme: "Geoinformation - Catalyst for planning,
	Johor Bahru,	development and good governance"
	Malaysia	Contact
	Walayola	AGSE 2012 is an interdisciplinary, international forum for sharing
		knowledge about the application of Geoinformatics with focus on
		application and on developing countries.
		Workshops planned so far:
		- Spatial Analysis with Open Source - gvSIG and SEXTANTE (D.
		Schröder, HFT Stuttgart, Germany)
		- ILWIS - advanced topics (Md. Zahid Hasan Siddique, Institute of
		Water Modelling, Dhaka, Bangladesh)
		- Raster based analysis using R statistical software (S. Pareeth,
		International Water Management Institute, Colombo, Sri Lanka)
		- Python in three hours (V. Wendlik, HFT Stuttgart, Germany)
		- Implementing OGC conformant webservices using PostGIS and
		GeoServer (R. Kettemann, HFT Stuttgart, Germany)
		- Application of MODIS 1 km LST product for characterisation of
		- Application of MODIS 1 km LST product for characterisation of
		- Application of MODIS 1 km LST product for characterisation of UHI (Arathyram R.S,m National Remote Sensing Center,ISRO
		- Application of MODIS 1 km LST product for characterisation of UHI (Arathyram R.S,m National Remote Sensing Center,ISRO Hyderabad)
		<ul> <li>Application of MODIS 1 km LST product for characterisation of UHI (Arathyram R.S,m National Remote Sensing Center,ISRO Hyderabad)</li> <li>An Introduction to Ecological Niche Modelling Using DIVA GIS</li> </ul>
		<ul> <li>Application of MODIS 1 km LST product for characterisation of UHI (Arathyram R.S,m National Remote Sensing Center,ISRO Hyderabad)</li> <li>An Introduction to Ecological Niche Modelling Using DIVA GIS (Sooraj N P, MSc.MPhil, Activ Environmental Services, Cochin)</li> <li>Strategic process management for introducing GIS (FJ. Behr,</li> </ul>
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23-27 July	San Diego, USA	<ul> <li>Application of MODIS 1 km LST product for characterisation of UHI (Arathyram R.S,m National Remote Sensing Center,ISRO Hyderabad)</li> <li>An Introduction to Ecological Niche Modelling Using DIVA GIS (Sooraj N P, MSc.MPhil, Activ Environmental Services, Cochin)</li> <li>Strategic process management for introducing GIS (FJ. Behr, HFT Stuttgart, Germany)</li> <li>Fuzzy logic analysis (Pulsani Reddy, India)</li> <li>Esri International User Conference</li> <li>Now Accepting Presentation Submissions</li> <li>Participation from the GIS community makes the Esri International</li> </ul>
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		accomplishments with fellow GIS professionals. Both new and seasoned ArcGIS users are encouraged to submit presentation abstracts for consideration. Of particular interest are proposals related to:  • Applying ArcGIS to new problems in innovative ways  • Leveraging new capabilities of ArcGIS 10  • Extending your GIS to a broader audience through we mobile applications  • Driving GIS advancements in your industry  • Collaborating inside and outside your organization to indefficiency, share data, and maximize geospatial resources Review the session topics to see how your contribution can fit this year's agenda.  Abstract submission deadline: passed.	eb and	
August 2012				
6 – 8 August	Melbourne, Australia	GITA 2012 – GITA 17th Annual Geospatial Solutions Confere "From Fundamentals to the Future – Managing Assets Spatial Important dates  30 March 2012   Abstract submission closes	lly"	
		late April 2012 Authors notified of initial acceptance or other successful authors invited to submit a full pa		
		5 March 2012 Registration opens		
		31 May 2012 Deadline for authors to register for the meeti	ing	
		Contact		
25 August –	Melbourne,	XXII International Society for Photogrammetry & Remote	_	
1 September	Australia	Sensing Congress Email: isprs2012@icms.com.au		
September 2012				
2-5 September	Wellington, New Zealand	The 4th Digital Earth Summit focusing on "Natural Disaste	ers"	
6-8 September	Tokyo, Japan	State of the Map 2012 (SoTM12)	(OSM)	
9-14 September	Ticino, Switzerland	The NCCR Climate Summer School, 2012 The NCCR Climate, Switzerland's Centre of Excellence in Climate and Climate Impact Research, invites young scientists to join leading climate researchers in a scenic southern Swiss Alpine setting on the occasion of the 11th International NCCR Climate Summer School 2012.  Deadline for applications: closed. Successful applicants will be notified in February 2012. Detailed information and the application form are available at <http: 2012="" summer_school="" www.nccr-climate.unibe.ch=""></http:> . Contact: University of Bern, NCCR Climate Management Centre, Zähringerstrasse 25, CH-3012 Bern, Switzerland, mailto: <nccr-climate@oeschger.unibe.ch> Telephone +41 31 631 31 45, Telefax +41 31 631 43 38.</nccr-climate@oeschger.unibe.ch>		
17–9 September	Hanoi, Vietnam	11th Asia Geospatial Forum Con	ntact_	
October 2012				
2-4 October –	Gauteng, South Africa	Call for papers for the peer-reviewed academic track of <a href="Missassangers">GISS/Ukubuzana 2012</a> Conference theme: 'An African Dialogue: Geomatics for Infrastructure Development and Service Delivery' Authors are invited to submit full-text academic papers,	<u>A</u>	



approximately 5000 words in length and relevant to the them subject matter of the conference, for the peer-reviewed acad track at the GISSA Ukubuzana 2012 conference.  Important dates  • 30 June 2012: Submission of full papers for peer-review for academic track  • 13 August 2012: Notification of acceptance of papers for academic track  • 10 September 2012: Submission of revised peer-reviewed papers for academic track  • 17 September 2012: Registration of presenters of accepted papers for academic track  • 25 September 2012: Submission of PowerPoint presentation conference CD  • 2-4 October 2012: GISSA Ukubuzana 2012 in Kempton Paguteng, South Africa  Instructions to authors of peer-reviewed academic papers.  Conference brochure (1 MB pdf)	full ons for
29 October – El Jadida, 10th biennial International Conference of the African	
2 November Morocco Association of Remote Sensing of the Environment (AAI	RSE)
29 October – El Jadida, AARSE 2012 Conference: Call for Side-event Workshops	
2 November	
from October 29 to November 2, 2012 in El Jadida, Morocco  "AMENDED"  9th holding of the AARSE Conference represents a major ev	
the long series of internationally recognized AARSE	ent in
conferences. AARSE 2012 welcomes dedicated workshops	_
organized as pre- or post-conference events or as halfday ev	
concurrent with the conference scientific programme (the latt	
exceptional cases only).	
Workshops should present state-of-the-art research and covidevelopment, deployment and operational use of Earth obsesty systems both space- and airborne.	
Workshop Summary Submission Interested parties should submit a summary of the workshop propose. The summary must include:	they
- Title of workshop;	
- Relevant keywords;	
- Full name and title, e-mail address, fax, telephone of works	hop
organizer(s);	
- Short description of the workshop (maximum one page);	
- Target audience;	
- Proposed duration of workshop The Workshop summary should reach the Chairman of the L	ocal
Organizing Committee: Prof. Kamal LABBASSI, no later than	
June 2012. Workshop proposers will be notified of acceptant	
soon as the requirements are fulfilled.	
Note: Please be aware that the following policy of the AARS	
Executive Council on workshops organized by other parties a	
- Organizers of a pre-/concurrent-/post-conference workshop	
pay a fixed amount of €3000 to cover expenses for projector	
venue, writing materials and microphone. Anything extra is to	
borne by the workshop organizer. However, organizers of a process of the conference workshop who pay the conference workshop w	
registration fee for 8 of their participants, 2 months prior to the	
conference date, pay a fixed amount of €1500 to cover costs	
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2014		AARSE AWARDS - All presenters are invited and encouraged to enter the AARSE award-winning competition for best paper presentation and best poster.  IEEE GRSS/AARSE TRAVEL FELLOWSHIPS - To support travel costs, accommodation and registration fees to attend conferences of the two societies in the field of Earth observation by remote sensing. The beneficiaries of these conference fellowships shall be African scientists or students who have their paper accepted for oral or poster presentation at the AARSE biennial conference.
	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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