Spatial Data Infrastructure
Asia & the Pacific Newsletter

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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 April 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 25th 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.

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.

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GSDI Member organisations, members of the GSDI Association Committees, Council and Board, and IGS members are involved in the many other regional and global initiatives on an on-going basis:
- Digital Earth (International Society for Digital Earth).
- Eye on Earth.
- Group on Earth Observations (GEO) / Global Earth Observation System of Systems (GEOSS).
- EuroGEOSS – GEOSS Project funded by the European Union.
- INSPIRE – Infrastructure for Spatial Information in the European Community.
- International Hydrographic Organisation – Marine SDI Working Group.
- UNESCO IOC – Marine/Coastal Spatial Data Infrastructure development.
- UNSD (Statistics Division) – UN-GGIM (UN Global Geospatial Information Management).
- UNGIWG (UN GI Working Group).
- UNESCO IOC – Marine/Coastal Spatial Data Infrastructure development.
- UNSDI – UN-GGIM (UN Global Geospatial Information Management).
- UNSDI – UNGIWG (UN GI Working Group).

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SDI News, Links, Papers, Presentations

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.

Remote-sensing database to upgrade planning in JK
Real-time spatial data about Jammu and Kashmir would help decision-making authorities in improving governance in all areas of the state, Chief Minister Omar Abdullah said today.
The chief minister was speaking at the launch of State Spatial Data Infrastructure (SSDI) project organised by the Department of Environment and Remote Sensing here.
Source: Asian Surveying & Mapping and Business Standard

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SDI Spotlight

This month's "Spotlight" feature is from Marzieh Reisi who is currently a PhD student in Environmental Engineering under the supervision of Associate Professor Lu Aye and her thesis title is "land use and transport sustainability". She has bachelor's and master's degrees in environmental engineering from Isfahan University of Technology, Iran.

Sustainable Transport

Sustainable transport, as one of the important dimensions of urban sustainability, has been developed to make a balance between transport socio-economic benefits and its social and environmental adverse effects. Current sustainability studies deal with the challenge of measuring transport sustainability, using long lists of sustainable indicators. Since using too many indicators is inappropriate and complex for decision making because of their hard interpretation, integrating different indicators into a single index is useful. Aggregating individual indicators into a composite index measures multi-dimensional aspects of sustainability that can not be captured completely by individual indicators alone. With this in mind, this research aims to develop a model for obtaining a composite transport sustainability index based on three aspects: environmental, social and economic, each one defined by a limited set of indicators.

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The process of calculating the composite index in this study was divided into several parts. At first, prominent indicators were selected in environmental (I_E), social (I_S) and economic (I_C) aspects. Then indicators with different measurement units were normalized. Weighing selected indicators, relevant indicators were first aggregated into three sub-indices and finally integrated to a composite sustainable transport index (I_{CST}). The study area is 79 statistical local areas (SLA) of Melbourne, identified by the Australian Bureau of Statistics (ABS).

Sustainable indicators are variables which are defined to measure progress towards sustainability. So indicators selection is the first step in all sustainability studies. Depletion of non-renewable resources, GHG emissions (CO_{2-e}), other air pollutants (CO, NO_2, PM_{10}), land consumption for transport accessibility, fatalities and injuries related to traffic accidents, mortality effects of air pollutants, car ownership costs, vehicle and general costs of accidents were selected as sustianable indicators and quantified using were 2006 ABS database and Victorian Integrated Survey of Travel and Activity 2007 (VISTA07). In the next step, indicators were normalized to remove inconsistency among them. After normalization, it was needed to weight indicators according to their importance. Principle componenet analysis /factor analysis (PCA/FA) which was used in this study, considers correlation among indicators to form a composite index that captures the information of individual indicators as much as possible. Each factor or component reveals the set of indicators with which it has the strongest association. PCA/FA is not subjective and considers differences among indicators, so it can overcome common problmes of other weighting method such as equal weighting or weighting based on experts opinions. After assigning weights, indicators in each dimension were aggregated into three sub-indices. In the later stage, these sub-indices were weighted and aggregated into I_{CST}. The I_{CST} is between zero and one which shows transport sustainability of each SLA compare to others. The I_{CST} in each SLA would be high if the average of its individual sustainability sub-indices was high.

The I_{CST} was the highest (0.93) for Inner Melbourne, as one of inner SLAs and the lowest (0.15) for Cardinia-South, as one of the outer SLAs. The outcome of this study, an index value, can be used by planning agencies and councils to diagnose the problem of SLAs with poor transport sustainability performances and to generate specific land use planning for solving these problems.

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GIS Tools, Software, Data

University of Melbourne, IBM and NICTA to Collaborate on Disaster Management Platform to Enable Fast Evidence-based Decisions Using Real-time Information
The University of Melbourne, IBM and NICTA (National ICT Australia)today jointly announced that they are collaborating to develop the Australia Disaster Management Platform (ADMP), a next generation open standards-based IT platform aimed at improving disaster management, protecting communities and potentially saving lives.
Over the past decade alone, the world has experienced a deluge of natural and man-made disasters impacting millions and costing trillions of dollars in property and infrastructure damage. From floods to bushfires to hurricanes to droughts to nuclear reactor meltdowns and chemical spills, disaster events were widespread and severe. Traditionally, many of the decision support tools used by emergency services are not interoperable thereby fuelling a siloed, uncoordinated and less effective approach to disaster management.
In response, researchers from the Melbourne School of Engineering at the University of Melbourne, IBM and NICTA will develop and implement an innovative, integrated, open standards-based disaster management platform designed to gather, integrate and analyse vast amounts of geo-spatial and infrastructure information from multiple data sets to create real-time practical information streams on disaster events. As well as enabling real-time situational awareness, the information streams will be used to develop simulation and optimisation models within available and changing constraints.
The Platform will then facilitate informed decision-making by communicating the information, via various channels and at appropriate levels of detail, to the wide spectrum of people involved in making emergency decisions - from the central coordinating agencies that are charged with directing activities, to on-ground emergency services personnel, through to the local community.
SOURCE: IBM press release

New Zealand - Canterbury SDI Acceleration: GIS Interoperability. Final Report to Land Information New Zealand on the Results of the May 2012 Plugfest

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New Zealand: Spatial data fast-tracked to aid recovery

Land Information NZ (Linz) has secured funding and canvassed interest in work towards a specific Spatial Data Infrastructure (SDI) to assist Canterbury's recovery from the effects of the earthquakes.
The project will run in parallel with the nationwide SDI, which is still at the planning stage.
The eight workstreams involved in the Canterbury project are mostly concerned with sharing of spatial and property information between the various organisations participating in the recovery.

The OGC announces Best Practices Document for Earth Observation Product, Service and Sensor Discovery   For further information

The Open Geospatial Consortium (OGC®) has adopted as an official OGC Best Practice a document titled, "OGC EO Product Collection, Service and Sensor Discovery using the CS-W ebRIM Catalogue."
This OGC Best Practices Document describes the relations that exist between several metadata conceptual models: Earth Observation (EO) Product, EO Product Collections, Sensors and Services. Specification of the linking between artifacts of these types is important for the process of cataloguing and discovering those artifacts.
CSW, or "Catalog Service – Web," is one profile of the OGC Catalog Service Standard (http://www.opengeospatial.org/standards/specifications/catalog), which defines common interfaces to discover, browse, and query metadata about data, services, and other resources. Electronic Business using eXtensible Markup Language, or ebXML, is a family of XML based standards sponsored by OASIS and UN/CEFACT providing an open infrastructure that enables global use of electronic business information in an interoperable, secure, and consistent manner. ebRIM is the accompanying electronic business Registry Information Model.
During the Heterogeneous Missions Accessibility (HMA) series of projects managed by the European Space Agency (ESA), the HMA stakeholders defined a minimal set of metadata elements that are required to describe a collection of EO products. The stakeholders also defined a minimal set of metadata elements required to describe the different Web service instances that are being deployed throughout the Ground Segments of the Global Monitoring for Environment and Security (GMES) Contributing Missions. These Web services include catalogue services for discovery of EO products, EO product collections and EO services, ordering services, feasibility analysis, Web map services and Web coverage services. This OGC Best Practice is a result of their efforts and discussions about these issues among the OGC membership. The document was finalized in the ESA General Support Technology Programme (GSTP) "Semantic-Web for Mediated Access Across Domains" (SMAAD) project.
The OGC EO Product Collection, Service and Sensor Discovery using the CS-W ebRIM Catalogue document is available and free to the public.
The OGC is an international consortium of more than 480 companies, government agencies, research organizations, and universities participating in a consensus process to develop publicly available geospatial standards. OGC Standards support interoperable solutions that "geo-enable" the Web, wireless and location-based services, and mainstream IT. OGC Standards empower technology developers to make geospatial information and services accessible and useful with any application that needs to be geospatially enabled. Visit the OGC website.

New Zealand: Natural Resource Group GIS Network

At the request of the Natural Resource Group Chief Information Officer Forum, the Department of Conservation is facilitating a natural resources group geographic information systems (GIS) network with the aim of identifying common needs, improving coordination, and identifying opportunities for collaborative projects and community partnerships. The goal is to provide regular forum and networking opportunities for GIS professionals within the natural resource group.
The current agencies within the natural resource group are:
- Ministry o the Environment
- Ministry of Business, Innovation and Employment
- Ministry for Primary Industries
- Te Puni Kōkiri (Ministry of Māori Development
- Greater Wellington Regional Council
- Statistics New Zealand
- Land Information New Zealand (LINZ)
- Horizons Regional Council
- NZ Transport Agency

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- New Zealand's Environmental Protection Authority (EPA)
- The Department of Conservation

Singapore Looks Underground for Space as Population Grows

Already one of the most densely populated countries in the world, tiny land-scarce Singapore is projecting its population to swell by a third over the next two decades. To accommodate the influx, its planners envisage expanding upward, outward and downward. The population target of 6.9 million people, an increase of 1.3 million from the present, is contentious in a country where rapid immigration has already strained services such as public transport and contributed to surging home prices and a widening wealth gap.
Source: Asian Surveying & Mapping and The Vancouver Sun

Philippine City Improves Land Use Plan with GIS

The city government of Butuan is working together with Carag State University to update the city's current Comprehensive Land Use Plan by using GIS. Butuan is a highly urbanised city located at the north-eastern part of Agusan Valley in Mindanao island. It is subdivided into 86 districts and has a population of 309,709 as per the 2010 Census.
Source: Asian Surveying & Mapping and FutureGov (Asia-Pacific)

The Guardian's interactive London Panorama (from the Shard)
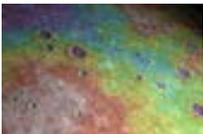
ISRO plans a new high-resolution earth satellite

The Indian Space Research Organisation is to build a remote sensing satellite, Cartosat-3, capable of taking images of the earth with a resolution of 0.25 metres.
Currently, GeoEye-1 produces the highest resolution earth images taken by a commercial satellite. The American spacecraft, launched in September 2008, is capable of taking panchromatic images with 0.41 metre resolution. WorldView-2, another satellite operated by the same company, DigitalGlobe, offers a best resolution of 0.46 metres. However, in accordance with U.S. regulations, commercially released images from these satellites are degraded to 0.5 metre resolution.
Source: The Hindu and Asian Surveying & Mapping

Spacecraft Makes First Complete Map of Planet Mercury

NASA's MESSENGER probe has imaged every square meter of the planet's surface
The $446 million Messenger probe (which stands for MErcury Surface, Space ENvironment, GEochemistry, and Ranging) launched in 2004. It made one flyby of Earth, two flybys of Venus and three flybys of Mercury itself before finally entering orbit around its destination planet in 2011.
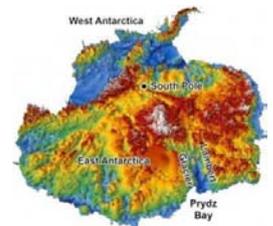The Messenger spacecraft's primary mission ran through March 2012, but it was granted a one-year extension to operate until March 2013. Now the Messenger mission science team is hoping NASA will approve a second mission extension for two more years, that would last until the spacecraft runs out of fuel and crashes into Mercury's surface.
Source: Scientific American

Antarctica in warmer times

Scientists have discovered that a wide, gentle river once flowed across the frozen wastes of Antarctica. Before the continent was hidden under two-mile thick ice 34 million years ago, the land was relatively flat, according to a new study. A 3D map of Antarctica reveals how it looked when the earth was warmer with deep valleys and mountains carved by glaciers. The 3D reconstruction of the topography hidden under Antarctica's two-mile-thick coating of ice was made using data from radar surveys.
Source: Geospatial World Weekly "image of the week"

Thailand Sets Out to Create Master Maps at Two Scales

Thailand has outlined a plan to create a centeral mapping database for the country at two scales, 1:50,000 and 1:4,000 over the next five years. The aim is to standardise across projects and departments as well as to aid in long-term planning and development for the country. The mapping program is expected to cost Bt140 billion, balanced by the development benefits as well as the confidence boost that it will give to investors.
Source: Asian Surveying & Mapping and The Bangkok Post

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Mapping New Zealand's road crash data

As police make their annual appeal for Kiwis to take care on the roads this Easter, Stuff has launched an interactive map painting a grim picture of our country's crash toll.

Data released by the NZ Transport Agency has revealed nearly 6000 serious injury or fatal crashes on New Zealand roads in the past three years - more than a third of them caused when a driver loses control or has a head-on on a bend.

Stuff's Blackspots project maps the latest road crash data involving motor vehicles, cyclists, motorcycles and pedestrians from January, 2010, to December, 2012. It will be updated regularly.

Source: The Nelson Mail

Hong Kong launches GIS-based weather portal

The Hong Kong Observatory (HKO) has launched two new online weather portals which aims to provide citizens with more personalised and location-based weather information.

The new website has user-customisable content, while another is a regional weather webpage based on the Geographical Information System, which integrates a variety of weather information on the same map.

The Hong Kong observatory has been consistent in innovating its public information platforms as part of its efforts to disseminate timely, relevant and useful weather information to the public. Just last year, the agency launched new online weather services which includes special weather tips and icons, location-specific rainfall forecasting on mobile devices, and a revamped page for senior citizens. All of which were well-received by the public.

Source: FutureGov

Pakistan: Bill drafted to regulate surveying, mapping

The National Assembly Standing Committee on Defence has submitted a report on 'The Surveying and Mapping, bill, 2013' to regulate and stop unqualified and unregistered firms to take part in surveying and mapping activities. The report was presented by Chairperson of the Standing Committee on Defence Dr Azra Fazal Pechuho.

According to reports, the Survey of Pakistan, being the national mapping organisation, is responsible for meeting the surveying and mapping requirements of armed forces as well as civilian organisations and departments, which falls under the administrative control of the Ministry of Defence. In the absence of any regulatory authority, it is technically and legally difficult to keep a check on unlawful activities.

The report says that the Surveying and Mapping Bill 2013 was prepared with the following objectives:

- To transform Survey of Pakistan into a National Mapping Agency (i..e., an authority for regulating surveying and mapping activities in the country).
- To make it compulsory for all firms involved in surveying and mapping activities to get them registered with Survey of Pakistan.
-To make it obligatory for all firms involved in surveying and mapping activities to adopt surveying and mapping standards framed by the Survey of Pakistan.
- To stop unqualified and unregistered firms to take part in surveying and mapping activities that can pose a security risk to the state.
- To protect established and affixed survey markers at various locations throughout the country from damage by assigning their responsibility to local district management/government.
- To avoid publication of efforts in the field of mapping especially in the Public Sector, thereby economising on public exchequer.
- To assess mapping requirements of public and private sectors on a yearly basis, thereby lending technical support to federal and provincial development plans and activities.

See also: Surveying and Mapping Act 2013 (Pakistan)

See also Pakistan Considering Bill that Would Ban Independent Mapping Projects (November 28, 2012)

Malaysia Launches a Mapping Portal for Youth Development

The Malaysian Youth Development Research Institute (IPPBM) and partners have launched the Malaysia Youth Mapping Portal to compile details about youth resources in the country. The aim with the portal is to help inform policy makers about the financial allocation and performance of various youth programs.

The portal contains 49 maps that detail the distribution of youth populaitons, sport associations, public facilities, as well as details on social relationships, health and reported drug abuse. The maps were compiled via surveys with more than 20,000 responses from across the country.

Source: Asian Surveying & Mapping

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IBM's Deep Thunder will Help South Korea Map and Model Weather Information

South Korea is working with IBM to deploy the Deep Thunder mapping and modeling sytem in order to upgrade their national weather information system. The goal is better understanding of weather patterns in order to better predict the location and intensity of weather events.
Source: Asian Surveying & Mapping

Are we ready for the oncoming capacity to see the unseen? by Matt Ball |

Remote sensing has its foundation in observations that provide unique viewpoints to enable greater insight. The data explosion that is taking place in earth observation, with new satellites launched around the world on a monthly basis, along with new unmanned aerial platforms, promise to usher in a whole new level of understanding of Earth and its systems. Increasingly the sensors that are onboard these platforms provide a span of spectral wavelengths that provide details beyond what can be seen with the human eye.

With the first images now returned from the Landsat Data Continuity Mission, we're very close to receiving ongoing global updates of thermal infrared, near-infrared and short-wave-infrared (SWIR) bands. SWIR and multispectral sensors are also planned for DigitalGlobe's commercial Worldview-3 satellite that will launch next year. A variety of commercial and scientific radar sensors also exist to cut through clouds, and provide precise measurement where optical sensors fail. These are just a few examples of our earth observation ability to see what was previously invisible. Yet to date, our collection capacity far outstrips our ability to aggregate and analyze this information for greater insight.
Source: Sensors & Systems

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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.

Ukraine's new cadastre is a step towards improving land governance

On January 14, 2013, Ukraine began the implementation of a new Law on Cadastre, a new Law on Registration and the operation of an electronic cadastre system that is improving efficiency, transparency and access to information in the property sector. The Rural Land Titling and Cadastre Development Project, financed by the World Bank and assisted technically by FAO, supports the issuance of state land deeds, mapping and the electronic cadastral system. These are elements of the institutional hardware and software to record land rights, make real estate transactions more efficient and improve transparency in land governance.
Source: UN FAO

Students design UAV for cost-effective surveying and mapping

Design students at California State University, Long Beach are working to overcome the stigma attached to drone aircraft by designing an affordable and simple unmanned aerial vehicle for use in research, emergency services and entertainment.
Source: Geospatial World Weekly

Mapping the Growth of OpenStreetMap

OpenStreetMap is a marvel of modern crowdsourcing. Since its creation in 2004, DIY cartographers – typically armed with GPS devices or satellite photography – have been slowly mapping the world's road networks and landmarks to create a free alternative to proprietary geographic data that can then support tools like trip planners. The process, which began in the U.K., is painstaking and piecemeal, and nearly a decade into it, more than a million people have contributed a sliver of road here or a surveyed cul-de-sac there.

Academics refer to this kind of collaborative mapmaking as "volunteered geographic information," and OpenStreetMap is one of the most successful examples of it out there.
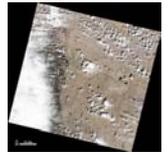Source: The Atlantic "Cities"

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First Images Released From Newest Landsat Earth Observation Satellite

Some of the first images released from the USGS from Landsat 8 gives us a look at the Colorado Front Range as well as an amazing view of last summer's wildfire burn just west of Fort Collins, Colorado.

Source: AnyGeo blog

See also Geospatial World Weekly "imager of the week", First images from the newest EO satellite

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Articles

Pioneering GML Deployment for NSDI — Case Study of US TIGER/GML - Author: Lingling Guo

ISPRS International Journal of Geo-Information 2013, 2, 82-93

Abstract: The National Spatial Data Infrastructure (NSDI) is defined as the technologies, policies and people necessary to promote sharing of geospatial data throughout all levels of government, the private and non-profit sectors and the academic community. The US Census Bureau is the federal agency lead for administrative units data, one of the seven data themes identified by the NSDI framework. The administrative unit is a unit with administrative responsibilities. These units are organized as nodes/lines/areas feature data. The OpenGIS Geography Markup Language (GML) is the XML grammar to express the geographic features. This study at the US Census Bureau investigates how the general-purpose GML standard could be leveraged and extended to describe the most comprehensive geographic dataset with national coverage in the US. Challenges and problems in dealing with data volume, GML document structure, GML schema design and GML document naming are analyzed, followed by proposed solutions proven for feasibility. Our results show that one key point in making a successful GML deployment for NSDI is to reflect the characteristics of the geographic data through a carefully designed GML schema, structure and organization. The lessons learned may be useful to others transforming NSDI framework data and other large geospatial datasets into GML structures.
Keywords: National Spatial Data Infrastructure (NSDI); OpenGIS Geography Markup Language (GML); Topologically Integrated Geographic Encoding and Referencing system (TIGER)

Underground quarrying industry and terrestrial laser scanning by FRANCIONI, GIRGENTI & VANNESCHI

INTRODUCTION

Terrestrial laser scanning (TLS) is being increasingly used in the study of rock slopes and quarries. Several Authors in the last decades showed the advantage in using this technique in geological and engineering-geological fields (STURZENEGGER *et ai*, 2009; VAN DER MERWE *et ai,* 2012; RICCUCCI *et ai,* 2010). The methodology allows to register the shape and position of objects by collecting a dense points cloud where every point, thanks to the topographic relief carried out by means of a Total Station (TS) and two GPS operating in a differential way (DGPS), is characterized by X, Y and Z absolute coordinates.

One of the most frequent problems in the use of TLS is represented by the presence of occlusions. Such a difficultycould be emphasized in case of underground quarries where thegeometry can be characterized by a complex reticulum of tunnels. In these contexts, several scans can be done fromdifferent positions in order to avoid occlusions in the outputdata. The problem in using this approach is that all the pointsclouds need to be registered within the same reference system.Considering that the final accuracy of a 3D model is functionof the points cloud registration, the use of a good methodologyfor the registration process becomes a fundamental step of thework.Purpose of this paper is to show how the combined used of TLS, DGPS and TS can aid to overcome the problem of occlusions and to register the data in a unique reference systemwith a very high accuracy. Special emphasis is given to the useof the Intersection Method (IM) and to the advantage that theseintegrated techniques can guarantee in quarries planning.Moreover, we give an example of stability investigation byusing TLS data in supporting the Unwedge analysis(Rocscience TM software)

KEY WORDS: *Excavation planning, stability analysis,terrestrial laser scanning, underground quarrying industry.*

Fifty Years of Post-Colonial Mapping in Nigeria: An Overview by Nnabugwu Uluocha

Cartographica: The International Journal for Geographic Information and Geovisualization (not an open access journal), Volume 47, Number 3 (2012), 179-194

Abstract:

Since achieving political independence from Great Britain in 1960, Nigeria has assumed full responsibility for the mapping of her territories. Fifty years on, the country has made some progress in mapping; this progress has not met all mapping needs, but it has advanced into the realm of the geospatial sciences. Digital systems

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linked to satellite observations and aerial surveys have been developed. There remains a gap between the demand for and the supply of maps and allied products in Nigeria. In the early part of the period under study (1960–2010), many mapping projects initiated in Nigeria became moribund, while some did not get off the ground at all. Consequently, like most African countries, Nigeria still lacks basic maps needed for judicious resource planning, development, and management. Instability coupled with lack of a well-established mapping policy, shortage of funding, and successive governments' failure to integrate mapping into national development has affected mapping in the country. The national development process has thus far not fostered the growth of a rich mapping culture. Nigeria, like many other countries in Africa, needs a national geospatial data infrastructure (NGDI), a robust mapping policy, improved funding of mapping programs, and strong cartographic institutions. If vigorously pursued, those measures will surely revolutionize the state of mapping in Nigeria and the rest of Africa.

Keywords: post-colonial, Nigeria, Africa, mapping

[What and Where: The Integration of Remote Sensing and GIS](#) by Matteo Luccio
The sciences, technologies, and practices of remote sensing and of geographic information systems (GIS) arose separately, developed in parallel, intersected, and are now inextricably linked. Nearly all the features in most GIS are collected by means of satellite imagery or aerial photogrammetry, and GIS is the application where this imagery is most commonly visualized.
…
It was not always this way. In the 1970s, 1980s, and early 1990s, remote sensing and image processing, on the one hand, and GIS on the other, were separate worlds—each with its own culture and software. …
Source: Sensors & Systems

[Why It's Nearly Impossible to Make GPS Work for India](#)
For one, the landscape is entirely different. Very few urban pockets are laid out in a grid. They're filled with winding, narrow roads prone to sudden turns and stops. Addresses are often out of order or sight. Streets pop up, change names and add new commercial inhabitants all the time.
Another obstacle is cultural. "People are not used to maps," Rahul explains. Giving directions in India is an idiomatic art, well-rehearsed and rarely done following formal strictures. He goes on: "I can guarantee you nobody will say, 'head south.'" Rather than cardinal directions, people will navigate the lost using a series of routes and familiar landmarks.
For a newcomer, the directions ("straight, straight, left") can be fruitless. And, I soon discovered, they can be just as ineffective for people who share a mother tongue.
So Rahul and his team set out to create a location tool that works for India.
Source: The Atlantic "Cities"

[How to Kick-Start Innovation with Free Data](#) by Philip Yam
Weather and GPS information stimulated the economy with new products and services. Todd Park, the U.S. chief technology officer, wants to repeat that success with the rest of the government's data trove
Source: Scientific American

[An approach to effective land registration](#) by Hyunil Yoo & Handon Joo
With the advent of satellite imagery resolution, the satellite photogrammetry has become a new area of practice to handle mass data and been utilized in many areas with its low cost and short production time. In particular, it is more likely to be utilized in geospatial industry than cadastral areas, such as topographic mapping, land use analysis and monitoring, land use planning, and disaster research etc. This is because, in terms of positional accuracy, satellite photogrammetry does not meet with criteria required by cadastral jurisdictions where there are basically strict standards due to land ownership security. What is more, a crucial issue is that the identification of the parcel boundary only relies on clearly visible boundary features or corners from the satellite imagery unless otherwise significant follow-up ground surveys are performed to check out every actual legal boundary points. Consequently, it could bring in inconsistency with already existing legal boundaries.
On the contrary, in the case where a wide range of areas are not entirely registered yet or are required to be newly or renewly registered for land information management rather than determining private land ownership. Land registration through the satellite photogrammetric technique could be an alternative solution in cost-effective and the time-saving way.
Source: Coordinates magazine

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Spatial Data Infrastructure Asia & the Pacific Newsletter

Books and Journals (including Videos and Web publications)

3D Visualisation World (February 2013 newsletter)
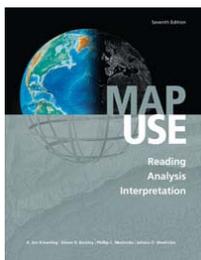
SDI Cookbook update
The SDI Cookbook, in its wiki version, now has an updated Chapter 10 to reflect the latest slate of standards and popular version numbers. We seek contributing editors for the other Chapters to also bring them up-to-date. About three months prior to the next GSDI Conference we will 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.

Strategic Spatial Projects: Catalysts for Change edited by Stijn Oosterlynck, Jef Van den Broeck, Louis Albrechts, Frank Moulaert, Ann Verhetsel **Reviewed by Jeff Thurston**
This text is focused upon the transformative nature of strategic spatial change for urban planning. The book weaves between design and strategic potential, with a goal of achieving sustainable systems in urban planning. The material asserts that technological plannig alone is not enough, nor urban planning based on competitive business outcomes. Instead, it suggests that spatial quality in terms of how urban areas function is the central force of success. Toward this end, socio-economic benefits must emerge through strategic planning efforts - and these need to take significant new ways of thinking.
Source: Sensors & Systems

Map Use: Reading, Analysis, Interpretation by A. Jon Kimerling, Aileen R. Buckley, Phillip C. Muehrcke, and Juliana O. Muehrcke **Reviewed by Jeff Thurston**
the 7th edition of a popular cartographic reference for professional and student use. This edition includes a focus upon the interpretation of maps and the information within them. Map accuracy and learning how to read maps is also included. The ability to read and understand what a map is expressing and representing helps to formulate questions, causing readers to wonder, query, imagine, understand and to investigate how and why the map data exists.
Source: Sensors & Systems

NewGeography website

Mapping London blog

LandScan: a news update from Land Information New Zealand, Issue 64 (March 2013)
In this issue...
- International acclaim for the LINZ Data Service
- Property rights reputation remains high
- LINZ establishes Crown Land Centre of Expertise
- Location-based information to boost Canterbury recovery
- First new nautical paper chart produced in-house
- LINZ takes learners on a geospatial adventure
- Stakeholder survey - thanks for your feedback

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 - August, 2012 Newsletter
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Spatial Data Infrastructure
Asia & the Pacific 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 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 (March 27)

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

UN-SPIDER December 2012

Thematic Mapping blog
Terrain mapping with Mapnik

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Just for Fun!

NASA slideshow – the Earth at night
Source: The Hindu

'Femme Fatales of Cartography'
… Or they can do the opposite, and try to resurrect what the digital behemoths have tossed aside: they can make maps beautiful, strange, or useful in more limited, particular ways. That's the path outlined in *A Map of the World: The World According to Illustrators and Storytellers*, a new atlas that prizes invention over navigation.
"Here, mapping is a personal affair," Antonis Antoniou writes in the preface, "and like in portraiture, can be caricatural, abstract, mysterious... These are maps you shouldn't trust yet cannot help but fall for -- they are the femme fatales of cartography."

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In the category of maps not to trust we might put Dorothy's "Film Map", which melds nearly 1,000 geographically named films into an imaginary city. Below, a vertical section of the map, which also includes *Miracle on 34th Street*, *Road to Perdition*, and *Field of Dreams*.
Source: The Atlantic "Cities"

Beer and Geospatial Technologies Share Something Powerful in Common: Innovation
Source: GISuser

A Martian landscape in four billion pixels
It's a massive image composited from several days of captures by the Mars Curiosity rover. The level of detail is astounding. You could spend days zooming around in there looking at martian rocks.
Source: "Compound Eye" blog at Scientific American

Is Google Maps Changing Our Behavior?
Extract: The people who used the digital navigation device demonstrated pretty good route recognition and rather poor survey knowledge. By comparison, the paper map users scored better on the survey test and almost perfect on the route test. What's happening here, Münzer and colleagues argue, is that pedestrians who use computer navigation fail to envision, encode, and memorize the cognitive maps they otherwise would have. The cost of convenience, in other words, is spatial orientation.
Source: The Atlantic "Cities"

When Harry Met Paris: Beck's Métro Map
Blogger Frank Jacobs relates the story of Harry Beck, the designer responsible for the original London
Underground railway map that has inspired all similar maps since.
Source: Frank Jacobs's "Strange Maps" blog

Geospatial World's "Image of the week"
Undersea communication cables

The Strange Beauty of Airports Photographed From Above
The photographer says this new series is all about "showing the patterns, layering and complexity of cities, and the circulation patterns for travel, such as waterways, roads, and airports that grow organically over time much like a living organism." As to how he actually snags these great shots, given our age of TSA paranoia, the artist says that he does get permission but would prefer to leave it at that.
Source: The Atlantic "Cities"

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Training Opportunities

Webinar -"Effortless: Serving Geospatial Imagery Doesn't Have to be so Hard"
This free event is scheduled to run live online Tuesday April 2 starting at 11 AM PDF and last just a half hour.
Thanks to the AnyGeo blog for this tip

OGC announces Climate-Hydrologic Information Sharing Pilot Demo webinar
The Open Geospatial Consortium (OGC®) announced that it will demonstrate the results of the OGC Climate-Hydrologic Information Sharing Pilot, Phase 1 (CHISP-1) at a webinar to be held from 11:00 a.m. – 12:15 p.m. EDT on Tuesday, April 16, 2013. The public is invited to register for the webinar. After the webinar, detailed CHISP-1 Engineering Reports will be made available to the public on the OGC Public Engineering Report website.
CHISP-1 is prototyping an innovative inter-disciplinary, inter-agency and international virtual observatory system for publishing water resources information collected from observations and forecasts in the U.S. and Canada, building on current networks and capabilities. CHISP-1 is designed to support:
-- Hydrologic modeling for historical and current stream flow and groundwater conditions. This requires the integration of trans-boundary stream flow and groundwater well data from the Canadian Groundwater

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Information Network and the US National Groundwater Monitoring Network, as well as national river network data from multiple agencies, including the US National Hydrography Dataset (NHD) and the Canadian National Hydrology Network (NHN). The demo focuses on cross-border communication about Souris River and Milk River water levels. The emphasis is on time series data and real-time flood monitoring.

-- Modeling and assessment of nutrient load into the Great Lakes. This requires accessing water-quality data from multiple agencies and integrating the data with stream flow information for calculating loads. The emphasis is on discrete sampled water quality observations, linking those to specific NHD stream reaches and catchments, and additional metadata for sampled data.

CHISP-1 demonstrates how adherence to open service interface and encoding standards from the OGC in proprietary and open source software makes it possible to link hydrologic observations data to the stream network, enabling queries of conditions upstream from a given location to return data from all relevant gages and well locations. This has previously not been practical with the diverse data sources available.

CHISP-1 also provides a model approach for bridging differences in semantics across information models and processes used by various data producers, to improve hydrologic and water quality modeling capabilities.

The CHISP-1 Demo Webinar is being produced in cooperation with Directions Media.

The OGC is an international consortium of more than 480 companies, government agencies, research organizations, and universities participating in a consensus process to develop publicly available geospatial standards. OGC standards support interoperable solutions that "geo-enable" the Web, wireless and location-based services and mainstream IT. OGC standards empower technology developers to make geospatial information and services accessible and useful with any application that needs to be geospatially enabled. Visit the OGC website.

Arizona State University GIS Lab
A good place to get a sense of where the geographic information system (GIS) field is headed is Lattie F. Coor Hall at Arizona State University in Tempe, Ariz. That's the home of the 30-credit-hour Masters of Advanced Study in GIS (MAS-GIS) Program within ASU's School of Geographical Sciences and Urban Planning. Here, students are exposed to not only the latest GIS concepts but also ever-evolving technologies.
Source: The American Surveyor

Maps and the Geospatial Revolution Coursera course offered by Penn State University
Learn how advances in geospatial technology and analytical methods have changed how we do everything, and discover how to make maps and analyze geographic patterns using the latest tools.

Workload: 6-9 hours/week   **Next Session:** Jul 17th 2013 (5 weeks long

The past decade has seen an explosion of new mechanisms for understanding and using location information in widely-accessible technologies. This Geospatial Revolution has resulted in the development of consumer GPS tools, interactive web maps, and location-aware mobile devices. These radical advances are making it possible for people from all walks of life to use, collect, and understand spatial information like never before.

This course brings together core concepts in cartography, geographic information systems, and spatial thinking with real-world examples to provide the fundamentals necessary to engage with Geography beyond the surface-level. We will explore what makes spatial information special, how spatial data is created, how spatial analysis is conducted, and how to design maps so that they're effective at telling the stories we wish to share. To gain experience using this knowledge, we will work with the latest mapping and analysis software to explore geographic problems.

Free Webinars on Solving Data Challenges
Sign up for future webinars and view past recorded webinars

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.

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

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Funding Opportunities, Awards, Grants

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.

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

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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.

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.

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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.

Source: Geospatial World and SLA press release

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Employment 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

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 cadaster 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.

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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 and at www.ignfi.com

GISSA Ukubuzana 2012 Conference Proceedings

Almost 600 delegates and 66 exhibitors attended the Geo-Information Society of South Africa (GISSA) 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.

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Spatial Data Infrastructure
Asia & the Pacific Newsletter

Date	Location	Event
April 2013		
15-17 April **"NEW"**	Al-Dammam City, Saudi arabia	**8th National GIS Symposium in Saudi Arabia** Contact
15-19 April	Canberra, Australia	**Surveying & Spatial Sciences Conference 2013** 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. Conference program
16-17 April **"NEW"**	Wellington, New Zealand	**Inaugural event of the Natural Resource Group GIS Network?- The Greatest Living Space Symposium** Theme: Pests, parks, trips, traps, data and maps Participatory and interactive conversations involving natural resource information.
22-26 April	Beijing, China	**35th International Symposium on Remote Sensing of Environment (ISRSE35)** *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.* **ABSTRACT SUBMISSION** Interested contributors should submit a summary of the paper they propose for presentation. ● All submissions should be in English. ● Abstracts should reach the Technical Programme Committee no later than 30 September 2012. ● Notification of paper acceptance will be made by 10 December 2012. ● 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. ● Please submit abstracts through the Abstract Submission link at http://www.isrse35.org ● All abstracts must be submitted online. **IMPORTANT DATES:** Registration Opens: Monday, 10 September 2012 Abstract Submission Deadline: Sunday, 30 September 2012 Workshop Submission Deadline: Tuesday, 30 October 2012 Acceptance Notification Monday, 10 December 2012 Early-bird Registration Deadline: Friday, 25 January 2013 Final Paper Deadline: Friday, 15 February 2013 Author Registration Deadline: Monday, 25 February 2013 Standard Registration Deadline Monday, 15 April 2013 Contact detail: ISRSE35 Secretariat E-Mail: isrse35@ceode.ac.cn Tel: +86 10 8217 8969 Fax: +86 10 8217 8968 Website: www.isrse35.org Address: Center for Earth Observation and Digital Earth, CAS No. 9

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		Dengzhuang South Road, Haidian District, Beijing 100094, P.R. China
24 - 26 April	Novosibirsk, Russia	**Siberia - Interexpo GEO-Siberia 2013** IX International exhibition and scientific congress "Interexpo GEO-Siberia-2013" -"Advanced Geospatial and Surveying Technologies for Environmental Management and Sustainable Development" **Contact :** http://www.ssga.ru/main/news/view/428/1/5555.html
25 - 26 April	Singapore	**First Asia Pacific 3D Documentation Conference** *Connecting 3D Communities*
May 2013		
1 – 3 May	Tainan, Taiwan	**8th International Symposium on Mobile Mapping Technology (MMT 2013)** 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 **Contact :** http://conf.ncku.edu.tw/mmt2013/index.htm
6-10 May	Abuja, Nigeria	The **FIG Working Week** 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 **FIG** and the **Nigerian Institution of Surveyors, NIS**, one of the three FIG member associations in Nigeria.
13-16 May	Rotterdam, The Netherlands	**Register before 15th Feb 2013 to avail complementary Awards Night and Gala Dinner Ticket** **Geospatial World Forum** 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 **13-16 May 2013** at **Beurs World Trade Center, Rotterdam, The Netherlands** aims at increasing our understanding of the concept of Monetising the value added by geospatial industry so far with its theme "**Monetising Geospatial Value and Practices**". Please submit your abstracts. For queries.
13-16 May	Minneapolis, MN	**Free and Open Source Software for Geospatial North America (FOSS4G-NA) Conference** The Call for Presentations closed February 15, 2013.
30 May - 1 June	Hong Kong	**8th International Symposium on Spatial Data Quality 2013** 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. **Themes** - Uncertainties in real world entities and ontology - Spatial accuracy assessment - Accuracy evaluation for DEM - Temporal uncertainty in spatial data - Incompleteness of spatial data - Logical consistence in spatial database - Semantic uncertainty in geographic data - Uncertainty in remotely sensed image processing - Uncertainty versus scales - Quality assessment in spatial data generalization - Spatial data models for uncertain objects in GIS - Model validation with imperfect ground truth data - Assessment of quality of crowdsourcing spatial data - Uncertainty propagation in spatial analyses and operations

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		- Spatial querying and reasoning with uncertain data - Uncertainty in geographical and environmental analysis - Spatial data quality and decision making - Spatial statistics - Geostatistical methods for spatial data quality assessment - Stochastic spatial simulation - Spatial data quality and web- and mobile-based services - Uncertainty in geovisual analytics - Quality of spatial data visualization - Meta-data and model for GIS data
June 2013		
8 – 9 June	San Francisco, USA	**State of the Map - US** Workshop – June 7 and OSM Hack Day – June 10
19 – 21 June	Manila, Philippines	**14th Annual Global Development Conference**
23-25 June **"NEW"**	Tainan, Taiwan	**3rd International Conference on Earth Observations and Societal Impacts (ICEO&SI)**
24 – 27 June	Ho Chi Minh City, Vietnam	**Eighth International Conference on"Geographical Analysis, Urban Modeling, Spatial Statistics" GEOG-AND-MOD 13** in conjunction with The 2013 International Conference on Computational Science and its Applications (ICCSA 2013) Submission - papers should be submitted at: http://ess.iccsa.org/ [please don't forget to select "**Geographical Analysis, Urban Modeling, Spatial Statistics GEOG-AND-MOD 13**" workshop from the drop-down list of all workshops.] **Important dates** 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
24 – 27 June	Ho Chi Minh City, Vietnam	**1st International Workshop on Agricultural and Environmental Information and Decision Support Systems (AEIDSS 2013)** in conjunction with The 2013 International Conference on Computational Science and its Applications (ICCSA 2013 Deadline for Full Paper submission: extended to February 1, 2013 Notification of Acceptance: March 10, 2013 **Workshop description:** 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): 　* Database, Data Warehouses 　* Geographic Information Systems 　* Cloud/Grid Computing 　* Distributed information systems 　* Interoperability between information systems

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		* Data Integration * Geovisulization Knowledge management * Spatial Big Data * Geosensor network * Software Engineering * Data Mining ... Proceedings and Journal special issue: Accepted papers of the Workshops will be included in a Springer-Verlag Lecture Notes in Computer Science (LNCS) volume. Selected papers will be invited to submit extended versions to a special issue of the Ecological Informatics journal.
July 2013		
2 – 5 July	Salzburg, Austria	**GI Forum 2013 – Creating the GISociety** The international **GI Forum** attracts an **interdisciplinary** audience interested in discussing progress and new ideas in GIScience. The GI_Forum communicates**innovative research and learning in Geographic Information Science** 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 Applied Geoinformatics – AGIT. The two symposia share some 1200 participants, the innovative AGIT EXPO exhibit and stimulating social events. Submission deadline **February 1, 2013**. Contact.
16 – 18 July	Gold Coast, Australia	**IGNSS 2013** The International Global Navigation Satellite Systems (IGNSS) Society Inc. is pleased to announce IGNSS 2013 *Closing Date for Submission of Abstracts:* Monday 4th February, 2013: Information regarding on line submission of abstracts and abstract templates will be updated in due course on the IGNSS Society website . *Submission of Peer Reviewed and Non Peer Reviewed Papers:* Information regarding On Line Submission of Peer Reviewed and Non Peer Reviewed Papers will be updated in due course on the IGNSS Society website (Click here). *IGNSS Free Membership:* There is no fee to register for Membership of the IGNSS Society. Complete the On Line Membership Form . Benefits of Membership include reduced Symposium Registration Fees. **Contact :** http://www.ignss.org/
21 – 26 July	Melbourne, Australia	**IEEE International Geoscience and Remote Sensing Symposium (IGARSS)** 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

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		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.
August 2013		
26-29 August	Kuching, Sarawak, Malaysia	**The 8th International Symposium on Digital Earth** (ISDE8) with the theme of "Transforming Knowledge into Sustainable Practice" will be held in Kuching, Sarawak, Malaysia.
September 2013		
2 – 4 September	Jakarta, Indonesia	**UN/Indonesia Workshop on Climate Change** **No website/URL at this stage**
12-14 September **"NEW"**	Enschede, NL	**GISDECO: URBAN FUTURES. Multiple visions, paths and constructions** **Deadline for abstract submission:** 15 April 2013 Notification of acceptance: 15 May 2013 **Deadline full paper submission:** 15 August 2013 ? The upcoming GISDECO (GIS for Developing Countries) conference is being hosted by the Department of Urban and Regional Planning and Geo-Information Management (PGM) (Faculty ITC, University of Twente) and jointly organized with N-AERUS (Network-Association of European Researchers on Urbanisation in the South).? CALL FOR PAPERS Some pre-conference workshops/meetings can be arranged for a small fee can also be facilitated. Should there be a desire for these please contact the local organization committee before 31 March 2013. For any further information or communication regarding the conference please only use this email.
23-27 September **"NEW"**	TSUKUBA, Japan	**ASPAR 2013 The 4th Asia-Pacific Conference on Synthetic Aperture Radar** "Overcoming the Hardships: Responding to Disasters with SAR"
24-26 September **"AMENDED"**	Kuala Lumpur	**Asia Geospatial Forum 2013** CALL for ABSTRACTS Contact {| Abstract Submission	30 May 2013
Abstract Acceptance / Non-Acceptance	15 June 2013
Authors' Registrations	30 June 2013	}
October 2013		
15 – 17 October	Coombe Abbey, Warwickshire, UK	**1st call for papers** for the **9th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires**. 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. Contact **EXTENDED** deadline for abstract submission is 15 April 2013.
November 2013		
4-8 November	Addis Ababa, Ethiopia	**GSDI 14 and AfricaGIS 2013**: 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 **Spatially Enabling Africa in**

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		Support of Economic Development and Poverty Reduction. **IMPORTANT DATES** Deadline for Submission of Abstracts:15 May 2013 Deadline for Submission of Full Papers for Refereed Outlets: 15 May 2013 Deadline for Submission of Full Papers for Non-refereed Outlet: 1 Sept 2013 Deadline for Full Conference Registration Payment for All Presenters: 15 Sept 2013
2014		
	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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