Spatial Data Infrastructure Asia & the Pacific Newsletter

| SDI-AP | December 2013 | Vol. 10, No. 12 |

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 December (& last for 2013) 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 and IGS Global News, Volume 3 Number 9 for 2013 (October 2013) (PDF)

GSDI Technical - Request for input
Which standards in the SDI Standards Baseline do your national/regional SDI activities use?
You may find the SDI Standards Baseline in Table 2, of Chapter 10 of the SDI Cookbook. Julie Maitra is building a table that will show the core SDI standards that various SDIs use for inclusion in Chapter 10 of the SDI Cookbook.
Contact - Julie Binder Maitra, FGDC Standards Coordinator, Federal Geographic Data Committee, Core Science Systems, U.S. Geological Survey, U.S. Department of the Interior, Phone: 703-648-4627, Fax: 703-648-5755, www.fgdc.gov/standards, http://www.linkedin.com/in/juliebindermaitra

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.

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

Destination Spatial Matchmaker portal - a way for students, employers and educators to link up

Destination Spatial is a free service provided by the spatial information industry and is committed to providing future geospatial professionals with opportunities and resources to gain valuable professional experience. The Matchmaker portal helps to bring together secondary schools, colleges and universities, students and employer organisations in the spatial information industry for work placement opportunities including work experience, scholarships and cadetships, internships, full-time, part-time and casual employment.

It is our goal to make the Matchmaker portal a gateway for geospatial students, whether school, college, university or postgraduate to gain valuable hands-on experience through practical work assignments with professional spatial employers.

The Matchmaker portal also provides spatial employers with a resource through which to source the assistance of highly qualified students specialised in various spatial fields.

Multi-Source Data Processing Middleware for Land Monitoring within a Web-Based Spatial Data Infrastructure for Siberia by Jonas Eberle, Siegfried Clausnitzer, Christian Huettich and Christiane Schmullius ISPRS Int. J. Geo-Inf. 2013(2): 553-576

Abstract: Land monitoring is a key issue in Earth system sciences to study environmental changes. To generate knowledge about change, e.g., to decrease uncertaincy in the results and build confidence in land change monitoring, multiple information sources are needed. Earth observation (EO) satellites and in situ measurements are available for operational monitoring of the land surface. As the availability of well-prepared geospatial time-series data for environmental research is limited, user-dependent processing steps with respect to the data source and formats pose additional challenges. In most cases, it is possible to support science with spatial data infrastructures (SDI) and services to provide such data in a processed format. A data processing middleware is proposed as a technical solution to improve interdisciplinary research using multi-source time-series data and standardized data acquisition, pre-processing, updating and analyses. This solution is being implemented within the Siberian Earth System Science Cluster (SIB-ESS-C), which combines various sources of EO data, climate data and analytical tools. The development of this SDI is based on the definition of automated and on-demand tools for data searching, ordering and processing, implemented along with standard-compliant web services. These tools, consisting of a user-friendly download, analysis and interpretation infrastructure, are available within SIB-ESS-C for operational use.

Keywords: middleware; land monitoring; web portal; MODIS; climate data; data integration; time-series data; standard-compliant data provision

Promote Asia Forum to GSDI members

Upcoming OGC TC/PC event. On December 2nd to 6th in India, OGC will hold a TC/PC meeting, and a session of Asia Forum will be held by Dr. Chou and GIS Research Center. Membership is not required to attend the Asia Forum. Anyone who is interested in geospatial and interoperability issues is welcomed. This is a great opportunity to have people discussing interoperability issues among Asia countries. Also, it's a chance to promote GSDI. Further details.
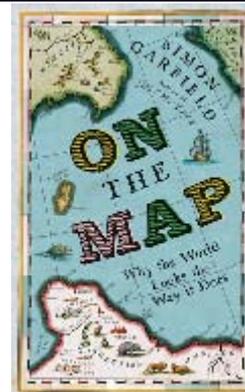
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SDI Spotlight

Book Review

For this month's *Spotlight* feature we publish a review of a book that one of our editors chanced upon recently as a weekend house guest: Simon Garfield's *On the map: why the World looks the way it does*, Profile, London, 445 pp and 15 pp Index (2012).

That the award-winning author Dava Sobel wrote the *Foreword* to this book raises expectations by the reader that it is worthy of readers' attention. These expectations are not misplaced. The author has written numerous non-fiction works and his prior publication record does not include cartography. This book is well-written and is cast to appeal to a wide readership including those professionally associated with map-making.

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The 22 chapters (and *Introduction* and *Epilogue*) range from the earliest maps through Eratosthenes' calculating the circumference (and size) of the Earth to today's Internet where much of the geographic data is collected by lay "citizen cartographers" using social media and "smart" phones. For completeness the author includes many of the personalities of those who make maps, those who collect and deal in maps, those who forge seemingly authentic old and rare maps and those whose specialty is expressing expert opinion on the provenance and "genuineness" of valuable maps from antiquity, and those who steal maps. Cartography also can lay claim to numerous fraudsters and hoaxers.

The author ranges beyond geographic cartography with his chapter on "Mapping the Brain" and maps associated with games such as "Monopoly". Chapter 12 describes how Dr Snow demonstrated the spread of cholera in nineteenth century London by mapping deaths by their proximity to the Broad Street water pump where the deceased had obtained their water.

Chapters 1, 4, 5, 9, 13, 21, & 22 do not have sub-chapters or "pocket maps" not necessarily related to the main chapter. For example, chapter 20 on Satellite Navigation in automobiles is followed by a "pocket map" relating the mapping of Martian canals in the late 19th and early 20th centuries.

Both interesting and entertaining, this volume is warmly recommended to readers. Visiting the author's homepage is a rewarding experience.

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

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GIS Tools, Software, Data

Update on OSM Crisis Mappers in the Philippines
An update from the Heidelberg University describes more than 1.000 OpenStreet Map (OSM) Crisis Mapping Volunteers developing a CrisisMap for the Philippines. The map shows Elements at Risk, population distribution, damaged buildings and Instagram images for Philippines. This update from the team…For supporting the disaster management activities after the typhoon Yolanda/Haiyan a new Crisis Map: http://crisismap.geog.uni- heidelberg.de/ has been set up by GIScience Research Group at Heidelberg University that visualizes map layers as the map layers showing population density and "elements at risk" for the Philipines. Credits for this voluntary effort go to Pascal Neis, Andreas Reimer, Maxim Rylow, Bernd Resch, Günter Sagl, Joao Porto and colleagues.
Source: GISuser blog and Heidelberg University GIS blog

Typhoon Damage Assessment maps from the Philippines via e-GEOS
Some of the first damage assessment maps from the Philippines have been released. According to e-GEOS, The Emergency Crisis Room was activated at 6:00 UTC on November 8, since when some 30 maps have been produced by the combined efforts of the e-GEOS Emergency Management Team, with others from GAF in Germany and ITHACA in Turin, with 25 people working day and night - e-GEOS is the Service Provider of the Emergency Management Service funded by DG Enterprise within the Copernicus Programme.
Source: GISuser blog

Bahrain Survey and Land Registration Bureau to receive advice from Ordnance Survey International
Ordnance Survey International has announced the signing of a five-year Specialist Advisory Framework Agreement with the Survey and Land Registration Bureau (SLRB) of the Kingdom of Bahrain. The agreement provides an opportunity for both organisations to work together collaboratively on a number of projects, the first of which will be the development of a new long-term strategy, which will support SLRB in continuing to develop its role as the authoritative cadastral and mapping authority for Kingdom of Bahrain.

Australia: First hydrometric monitoring guidelines available
The ten guidelines aim to strengthen the integrity of data used in water resources assessments and planning. The guidelines support the Bureau's (of Meteorology) national water data archive, the Australian Water Resources Information System (AWRIS). Water data and related information are contributed into AWRIS by more than 200 water monitoring organisations in Australia.
Serving as a common national language, the guidelines have been developed, agreed and endorsed by

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industry to describe recommended practice in water resource data collection and management. They assist to communicate an industry approach with end users of the data and ensure the data being collected and ingested into AWRIS is consistent and comparable between various collecting organisations.

In 2010 the Bureau established the Water Information Standards Business Forum as a nationally representative group to coordinate and foster the development and endorsement of water information guidelines and standards. The Forum endorsed the new guidelines following two years of work by technical experts to write, review and submit the guidelines. Importantly, the Australian Hydrographers Association has been closely involved as the peak industry body, contributing assistance and input throughout.
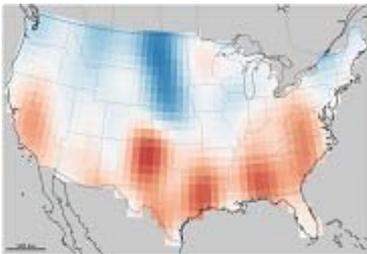
Where Catastrophic Droughts and Floods Are Bound to Happen in the U.S.
Many Americans might not realize it, but the country is headed for a brutal reality check in terms of access to clean, cheap water. Climate change's amplifying effects are turning dry regions into virtual deserts and wet ones into flood zones, setting the stage for a horde of "water-related catastrophes, including extreme flooding, drought, and groundwater depletion,"warn scientists at UC Irvine.
The editors draw readers' attention to the source of the map being NASA's GRACE twin satellite system
Source: The Atlantic "Cities": Maps and NASA Earth Observatory

Congressman in US takes ride in a driverless car
Rep. Bill Shuster (R., Altoona) made a 33-mile trip from Cranberry Township to Pittsburgh International Airport in a computer-operated car. The socalled driverless Cadillac SRX was designed by Carnegie Mellon University researchers who have been working on the project since 2008. The car uses inputs from radars, laser range finders, and infrared cameras to maneuver in traffic. He said he can now imagine a future where such vehicles enter the mainstream, potentially reducing accidents, fatalities and congestion on roads. Raj Rajkumar, the leader of the project, said the biggest design challenge for driverless vehicles is managing unpredictable events. www.philly.com
Source: October 2012 My Co-ordinates ezine
See ALSO Maps for self-driving cars
Nokia is teaming up with Mercedes-Benz with the goal of designing 3D maps for self-driving cars. The mapping feature will be provided by Nokia's Here, a)_ cloud-based service that offers drivers real-time traffic updates, road closures, and recommendations based on their location. Gearing up now for Internetconnected cars, Here will ultimately take on the challenge of directing selfdriving cars. http://news.cnet.com
Source: October 2012 My Co-ordinates ezine

New Australian-based 3D GIS User Group

Free and Open Access to Sentinel Satellite Data
The European Space Agency (ESA) has announced that free and open access to Sentinel satellite data will become available during the Copernicus operational phase. Copernicus is an earth observation program operated by a partnership of the European Commission (EC), European Space Agency (ESA), and the European Environment Agency (EEA). The European Delegated Act on Copernicus data and information policy provides for free, full and open access to users of environmental data from the Copernicus program which will include data gathered from the Sentinel satellites.   The Sentinel satellites also capture data over Australia.

NSF-supported geospatial data project to let almost anyone put almost anything on the map
Purdue researchers and ITaP are embarking on a $4.5 million, four-year project to create a powerful Web-based system that will allow researchers worldwide to manage, curate, share, analyze and visualize geospatial data for purposes ranging from predicting damaging floods to projecting climate change effects on the poor.
The project funded by the National Science Foundation will build geospatial data hosting, processing and sharing capabilities into Purdue's HUBzero platform. This should open the way for easy development of a variety of Web-enabled tools for probing and presenting geospatial data in ways that can, among other things, help policymakers address pressing issues in the U.S. and around the globe.
The geospatial data project stems from earlier, specialized projects involving HUBzero and geospatial data, such as: driNET for research on the causes and effects of droughts; WaterHUB for studying hydrology; and GEOSHARE an international hub for research on agriculture, land use and the environment.
Originally developed by Purdue to power nanoHUB.org, HUBzero is a Web-based platform, or cyberinfrastructure, for scientific and other kinds of research and educational collaborations. A major HUBzero

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feature is its ability to make computational research tools, and visualization and analysis of results, easily available through a Web browser. HUBzero's built-in social networking creates online communities in almost any field or subject matter and facilitates communication and collaboration, distribution of research results, training and education. The platform also offers a growing set of data management and interactive database capabilities and simplified access to high-performance and cloud computing hardware.
Source: Purdue University news release

India Begins Groundwater Mapping of the Entire Country

The Central Ground Water Board (CGWB) has recently launched a helicopter-borne electromagnetic survey in Patna for accurate and comprehensive assessment of groundwater resources of the district. A helicopter will collect important data of the subsurface geology and groundwater occurrence up to a depth of 300 metres.
The project is funded by the World Bank, and has been launched in collaboration with the National Geophysical Research Institute (NGRI)-Hyderabad and Aarhus University, Denmark. The interpretation of the data will be validated on the ground with borehole results.
The unique ability of the heli-borne survey to accurately map the top 300 metres in fine detail has been used by engineers and environmentalists in Australia, Malaysia, Norway, Greenland, Italy, Germany, Holland, France and other countries, and has been employed for a wide range of applications, including tunnel pre-engineering, contaminant plume detection, tailings pond assessment and coastal salt water encroachment studies.
Source: Asian Surveying & Mapping and the Times of India

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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.

Ghana: State-of-the-Art Flood Forecasting Model Launched for White Volta River

- With the development of a new warning and flood forecasting system, the Ghana government makes steps toward managing flooding in the White Volta River Basin, and saving lives
- The government and communities along the White Volta River benefit from greater advanced notice of imminent flooding
- Authorities will continue to use the system for planning, advance notice and as the foundation for the development of similar systems in other African countries
Several organizations collaborated to assess the impact of climate risks, starting with a steering committee led by the Water Resources Commission and including;
•The National Disaster Management Organization, Hydrological Service Department
•Ghana Meteorological Agency
•Volta River Authority
•Water Research Institute of the Centre for Scientific and Industrial Research
•Ghana Irrigation Development Authority
•The National Environmental Protection Agency and the Savannah Accelerated Development Authority
The steering committee coordinated the creation of the system and ensured all major stakeholders had a hand in the advanced planning and flood management for the entire White Volta River Basin.

Interactive Online Story Map on Elephant Poaching

The Wildlife Conservation Society and geographic information system (GIS) software innovator Esri jointly developed and produced an online Story Map that combines spatial data, excellent cartography, and Web mapping tools to visually tell the story of the elephant poaching crisis.
The Story Map is available for news organizations to illustrate the depth of the crisis visually to their readers and viewers. The added dimension of a highly-specific representation of the crisis adds value to any account of the ivory crush or wildlife poaching and trafficking.
Source: GISuser blog and

How Google Earth is busting Persian Gulf nations for overfishing

Weapons-grade uranium isn't the only thing Iran may be hiding. The country does not report its fishing catch to the United Nations, which is problematic given that the Persian Gulf, like other areas of the world, suffers from

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overfishing. But thanks to Google Earth, scientists now know that Iran hauls in more than 12,000 tonnes a year from 728 weirs, large structures built in intertidal zones to trap fish.

In a first of its kind study released today, scientists at the University of British Columbia in Vancouver used Google Earth images to calculate how much fish was actually caught by Persian Gulf nations compared to what they reported. The result: The official numbers are nothing but one big fish tale.

Source: Quartz.com and ICES Journal of Marine Science

Lesotho: Land Administration Reform Project successfully completed

For over 5 years, Kadaster was responsible for the project management of the Land Administration Reform Project (LARP) in Lesotho. In October 2013, Kadaster brought this project to a successful conclusion.

During the project, acts and regulations were amended and an act relating to apartments was drafted. Thanks to the amended legislation, it was possible to set up a Land Administration Authority (LAA). The project identified a total of nearly 60,000 informal land owners. The LAA uses this information to prepare and register ownership documents, so that ownership can be formally established. This will form the basis for improving the Lesotho economy.

Land Management System - The LAA uses a Land Management System, which is based on open source and the Land Domain Model and was modified and implemented with the support of the Food and Agricultural Organization (FAO).

Project donor - Kadaster was commissioned for this project in early 2008. The US-based Millenium Challenge Corporation, an organisation aimed at fighting worldwide poverty through economic growth, donated to the project. The project, which was worth 362 million dollars, consisted of three parts: Water, Health and Private Sector Development (PSD). The project for land administration (LARP) fell into the last category.

Kadaster International, a GSDI Association member, is a department of the Netherlands' Cadastre, Land Registry and Mapping Agency (Kadaster).

See also: The Lesotho Land Administration Authority: the White Elephant Lives

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Articles

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Multi-Source Data Processing Middleware for Land Monitoring within a Web-Based Spatial Data Infrastructure for Siberia by Jonas Eberle, Siegfried Clausnitzer, Christian Huettich and Christiane Schmullius
ISPRS Int. J. Geo-Inf. 2013(2): 553-576

Abstract: Land monitoring is a key issue in Earth system sciences to study environmental changes. To generate knowledge about change, e.g., to decrease uncertaincy in the results and build confidence in land change monitoring, multiple information sources are needed. Earth observation (EO) satellites and in situ measurements are available for operational monitoring of the land surface. As the availability of well-prepared geospatial time-series data for environmental research is limited, user-dependent processing steps with respect to the data source and formats pose additional challenges. In most cases, it is possible to support science with spatial data infrastructures (SDI) and services to provide such data in a processed format. A data processing middleware is proposed as a technical solution to improve interdisciplinary research using multi-source time-series data and standardized data acquisition, pre-processing, updating and analyses. This solution is being implemented within the Siberian Earth System Science Cluster (SIB-ESS-C), which combines various sources of EO data, climate data and analytical tools. The development of this SDI is based on the definition of automated and on-demand tools for data searching, ordering and processing, implemented along with standard-compliant web services. These tools, consisting of a user-friendly download, analysis and interpretation infrastructure, are available within SIB-ESS-C for operational use.

Keywords: middleware; land monitoring; web portal; MODIS; climate data; data integration; time-series data; standard-compliant data provision

Comparison of Different Caching Techniques for High-Performance Web Map Services
by Alexander Loechel & Stephan Schmid
International Journal of Spatial Data Infrastructures Research, Vol 8 (2013)

Abstract: The demand for digital maps on the Internet has increased considerably in the last few years. Therefore the performance of Web Mapping Services is becoming more and more important. This article introduces different caching techniques for high performance transfer of data using standardized Open Geospatial Consortium (OGC) Web Map Services (WMS). It describes and examines different caching

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mechanisms based on tile caching, reverse proxy caching and web application acceleration. Furthermore it demonstrates benefits, problems and how data needs to be modified for different caching techniques. The article outlines the advantages of WMS caching systems and investigates the behaviour of these systems with an increasing number of concurrent requests using benchmark tests. This includes the examination of applicability of the INSPIRE service level agreement for view services.
Keywords: Benchmark, Caching, INSPIRE, OGC, WMS

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Keywords: middleware; land monitoring; web portal; MODIS; climate data; data integration; time-series data; standard-compliant data provision

[A Vision for Global Research Data Infrastructures](#) by Costantino Thanos, Data Science Journal Vol. 12 (2013) p. 71-90

Abstract: New high-throughput scientific instruments, telescopes, satellites, accelerators, supercomputers, sensor networks, and running simulations are generating massive amounts of data. In order to be able to exploit these huge volumes of data, a new type of e-infrastructure, the Global Research Data Infrastructure (GRDI), must be developed for harnessing the accumulating data and knowledge produced by the communities of research. This paper identifies the main challenges faced by the future GRDIs, defines a conceptual framework for GRDIs based on the ecosystem metaphor, describes a core set of functionality that these GRDIs must provide, and gives a set of recommendations for building the future GRDIs.   [Full text PDF](#)
Keywords: Information networks, Distributed systems, Distributed databases, Interoperability.

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Books and Journals (including Videos and Web publications)

CALL for PAPERS: [Special Issue "NeoGeography and WikiPlanning 2014"](#)
A special issue of Future Internet
Deadline for manuscript submissions: 15 March 2014
The special issue will examine the creation, diffusion, and use, through the web, of geographic information and focuses particularly on the Web 2.0 phenomenon, so as to understand how the interaction between producers and non-expert users can modify the traditional fundamentals of map making, which is one of the most ancient forms of human expression. Other than IT and spatial experts (or spatially aware professionals or academics), the issue's topic should be attractive for people not directly dealing with such 2.0 spatial issues, but who are active as scholars in spatially related disciplines (*i.e.*, geography, geoscientists, spatial economists, spatial planners, *etc.*). These scholars can contribute with a vision on the role of the "traditional" mainstream subject and their relationship with such new instruments and tools.
The special issue represents an opportunity for provocative debate and reflection on the roles of both traditional disciplines(*e.g.*, geography, economics, planning, *etc.*) and of new ones (*e.g.*, GI sciences, image processing, *etc.*) in comparison with the bottom-up blossoming of uncontrolled, nearly anarchical geographical expressions.

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CALL for PAPERS: Earth Science Informatics, Special Issue – Semantic e-Science - Call for papers
Full papers due: March 15, 2014

As the volume, complexity, and heterogeneity of data resources grow, scientists increasingly need new capabilities that rely on "semantic" approaches (e.g., in the form of ontologies and vocabularies — machine encodings of terms, concepts, and relations among them) to help understand the meaning of data. The field of semantic e-Science fosters the growth and development of data-intensive scientific applications based on semantic methodologies and technologies, as well as related knowledge-based approaches. In recent years, semantic methodologies and technologies have been gaining momentum in e-Science areas such as solar-terrestrial physics, geology, ecology, oceanography, meteorology, and life sciences, to name a few. The developers of e-Science infrastructures are increasingly in need of semantic-based methodologies, tools, and middleware. This infrastructure will in turn facilitate scientific knowledge modeling, logic-based hypothesis checking, semantic data integration, application composition, integrated knowledge discovery and data analysis for different scientific domains, and building systems for use by scientists, students, and, increasingly, non-experts.

This special issue invites research papers that demonstrate how semantic methodologies and technologies are currently meeting scientific or engineering goals in Earth and space science domains. Papers should highlight the innovative designs, methods or applications associated with the semantic
technologies. Review papers presenting state-of-the-art knowledge about a subject in semantic e-Science and methodology and software papers about a new algorithm or software package are also welcome.

Authors should prepare their papers following the instructions for authors provided by Earth Science Informatics. Papers should be submitted on-line indicating the special issue "Semantic e- Science". Authors may contact a guest editor about their intention to submit, including a short description of the intended submission.

Earth Science Informatics is a widely indexed and circulated international journal

D_City manifesto

The Group on Earth Observations (GEO) has sponsored two print runs of the D_City manifesto: the world's first comprehensive 'snapshot' report on efforts to create a networked environmental monitoring system.

Warmly received by several hundred geospatial scientists attending the latest International Society for Digital Earth (ISDE) conference in Kuching, Malaysia in September 2013, the D_City: Digital Earth | Virtual Nations | Data Cities report also is being commended by publishers and editors of the top three international geospatial trade publications (Geospatial World, Sensors and Systems, and Apogeo Spatial), the science and development network (SciDev.Net), architecture book publishers Actar, and the quarterly journal for city governments (Cities Today). They are all supporting different aspects of the emerging 'Science for Cities' and 'Data Cities' movement.

Shortly before the ISDE conference, GEO and the ISDE issued a joint media release announcing GEO's approval of the report, which was co-edited by two founders-leaders of the ISDE's digital cities working party, Davina Jackson and Richard Simpson. They collaborated on D_City (the 'D' being defined as 'dynamic digital data design for decent development') to help educate next generation urban development professionals about effective ways of using geospatial technologies.

The D_City report can be read and downloaded at dcitynetwork.net/manifesto. It has been online since early 2012. The current update includes a 'Postscript' summary of latest advances supporting the GEO-co-ordinated 'global Earth observations system of systems' (GEOSS) project. These recent ventures include the International Council for Science's Future Earth project and programs promoting cities and the emerging 'space economy' at the Organization for Economic Co-operation and Development.

—Geospatial World has published an interview with D_City co-editor and 'network catalyst' Davina Jackson, on its 'Asia Geospatial Digest' site

GSDI and IGS Global News, Volume 3 Number 9 for 2013 (October 2013) (PDF)

MMA Location Terminology Guide

World Disasters Report 2013: Focus on technology and the future of humanitarian action

2013 Tasmanian Bushfires Inquiry Report

Disaster Risk Management in Asia and the Pacific Issues Paper (April 2013)

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D_City: New report on modelling Earth systems for climate and environmental solutions

The world's first comprehensive 'snapshot' report on how science and technology leaders are supporting the 'global Earth observation system of systems' (GEOSS) project. Titled *D_City: Digital Earth | Virtual Nations | Data Cities*, the report has been produced to explain to urban development professionals the emerging 'Google era' of satellite Earth observations and geospatial science and technologies for modelling climate-related environmental solutions.

Co-edited by urbanists and scientists leading the digital cities working party of the International Society for Digital Earth, the book's first printings have been sponsored by the Group on Earth Observatons secretariat in Geneva, led by Ms Barbara J. Ryan.

GEO is supporting D_City's proposed 'network concept diagram' for the GEOSS project – which suggests a new stream of 'Virtual Nations' projects and increasing integrations of computer modelling the stocks and flows of nature, buildings and cities.

The GEO news article is at earthobservations.org. The report (with downloadable PDF) is available from dcitynetwork.net/manifesto. Printed copies can be ordered from DCity at info@dcitynetwork.net. The media release is at http://dcitynetwork.net/wp-content/uploads/2013/09/GEOISDE-Data-Cities-press-release.pdf . A blogpost with links to press coverage of the report is at http://dcitynetwork.net/2013/09/geo-sponsors-first-printings-of-d_city-report/

NewGeography website

Mapping London blog

LandScan: a news update from Land Information New Zealand, Issue 66 (September 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.

Steve Goldman's **Map Fodder** website

Location matters: spatial standards for the Internet of Things

ITU-T's latest Technology Watch report introduces readers to location (spatial) standards and their role in enabling the Internet of Things, describing how communications infrastructure has increased people's associations with the natural and built environment as well as how this can be leveraged to improve governance and service delivery by revealing new insights into how we interact with one another and the services and infrastructures that surround us.

Authored by staff and members of the Open Geospatial Consortium (OGC), with support from ITU-T, the report is titled "Location matters: Spatial standards for the Internet of Things" and can be downloaded free of charge.

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The report discusses the technologies and standards emerging in support of location-based services (LBS), analyzing shortfalls in interoperability and highlighting where global standardization can tap the full potential of these fast-maturing technologies and the valuable data they return.

Spatial standards' role in the marketplace is critiqued with a view to uncovering clear trends or market drivers, and readers will discover that location matters in a wide range of sectors, with examples being made of emergency and disaster management and response; smart infrastructure; smart water management; and, of course, transportation.

The report goes on to describe the spatial standards landscape, looking at the activities of the involved standardization bodies and concluding with an analysis of the greatest obstacles to be overcome in the spatial standards arena.

David Rumsay Map Collection

International Society for Digital Earth - August, 2012 Newsletter

Thoughts on the Geospatial industry, Open Standards and Open Source Cameron Shorter's blog

New Zealand - SDI Cookbook Chapter 6 – Government and Industry, moving forward.
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

Technology & More (July 2013)

Mother Pelican: A Journal of Sustainable Human Development
The November 2013 issue has been published

LiDAR News, Vol 3, No 16 (Vol 3, No 17; 22 October, 2013) (Vol 3, No 18, 6 November, 2013)

LiDAR News magazine (Sept/Oct, Vol 3, No 5, 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 (October 2), **The American Surveyor** newsletter (October 16),
The American Surveyor newsletter (October 30), **The American Surveyor** newsletter (November 13)

The American Surveyor Vol.10 No.9 (September 2013)

My Co-ordinates e-zine – October 2013 issue (PDF)

UN-SPIDER Newsletter June 2013

UN SPIDER Updates October 2013

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**Spatial Data Infrastructure
Asia & the Pacific Newsletter**

Thematic Mapping blog Terrain mapping with Mapnik

Just for Fun!

Interactive Map Reveals Earth After The Ice Melts and Sea Level Rises
Global warming, carbon emissions, the vanishing ice cover… these are all things that are on the minds of us all these days. Ever imagine what would the Earth look like if the World's ice simply all melted? Well, now thanks to National Geographic you can see a model of just that. The projected result is a World where the sea level would rise more than 200 feet, coastlines would be forever altered and the average temperature would be about 80 degrees Fahrenheit. A scary thought indeed…

You can view the map HERE on National Geographic where you can also go directly to an interactive map service. The interactive map lets you explore each continent, viewing the existing shoreline compared to the newly drawn shoreline based on sea level change.
Source: AnyGeo blog and National Geographic and The Age

The New-er Google Maps with More imagery, more StreetView and Pegman
Remember PegMan? You know, the cool little guy that helps you navigate around Google maps? Well, google has brought back pegman (did you notice he was gone?) . Recall, he's the little yellow guy that would drag onto a street map in order to gain access to Google Street View imagery. In addition to the return of pegman Google maps is also offering a host of new features like photo spheres (think 360 degree imagery) , Earth Tours (stunning 3D imagery of buildings), and more.
Source: AnyGeo blog and Google Maps blog

Music is our GPS, so we need to keep supporting it
In order to understand its prominence in our lives, it may be more fruitful to consider what music does. To make my point I would like to argue that music primarily serves as people's Global Positioning System (**GPS**), an essential tool to define ourselves and our place in our environment.
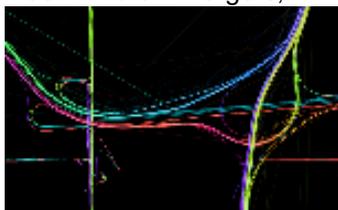Source: The Conversation

Map: The US's Public Radio Stations
Here's an online map of public radio stations across the United States. Created by Seattle-based photographer and designer Andrew Filer, it shows the broadcast range of every American public radio station—and not just NPR affiliates, but classical, pop, and other non-profit broadcasters. The interactive version of the map is, appropriately enough, located at PublicRadioMap.com.

Source: The Atlantic

Tracing the World's Most Complicated Roadways With GPS Data
The intricate highway interchange is always easier to appreciate from above. Take away the congestion, the last-minute mergers, the tail-pipe exhaust, the conflicting road signs and the vertigo, and a

perfect cloverleaf really starts to look like a marvel of engineering.
Perhaps you've seen photos like these that capture the most complex Interstate overpasses as interlocking ribbons of asphalt. The above image, though, presents some of this same information in a quieter, more beautiful way, reducing interchanges – in this case, the intersection of I-70 and the I-465 beltway around Indianapolis – to their simplest geometry.
Source: The Atlantic "Cities" Maps

Mapping How Americans Talk

Former Harvard professor Bert Vaux asked tens of thousands of people across the U.S. these questions and released the results as the 2003 Harvard Dialect Survey. The data are fascinating; they reveal patterns of migration, unexpected linguistic kinships between regions, and the awesome variety of words we say and how we say them.

The study has wormed its way into popular consciousness and periodically morphs into a meme (just search "accent tag" on YouTube). Last summer, North Carolina State University graduate student Joshua Katz turned Vaux's geographical data into a set of stunning heat maps that went viral.

For the video, we called people across the country to ask them a few of Vaux's questions, then layered the answers with maps based on Katz's. You'll hear what Philadelphians call a group of people, the many ways of pronouncing "pecan," and what Southerners mean when they say "the devil is beating his wife."

Source: The Atlantic

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Training Opportunities

3D Printing Summer School - ADVANCE NOTICE - University of Melbourne

We are still awaiting details of the 3-D Printing Summer School to be conducted in late January/February 2014 at the University of Melbourne's School of Engineering. An Application Form (& Scholarship application) and further information is available here.

"Open Geospatial Science & Applications" webinar series launched

The "Open Geospatial Science & Applications" webinar series commenced on 18th October. The first webinar will be on "OSGeo Live for Education" by Jeremy Morley (University of Nottingham). This first webinar will address the theme "OSGeo Live for Education". With free registration, this event is appropriate for all who are interested in knowing more about the ICA-OSGeo Lab Network and its education activities. In addition to giving an overview of OSGeo Live, Jeremy will be sharing his experiences of using the OSGeo Live system for his MSc teaching in GIS at the University of Nottingham.

OSGeo Live 7.0 features more than fifty open source, standards compliant geospatial desktop applications, web applications and frameworks. A complete installation kit and high-quality sample data in multiple industry standard formats are included. It is composed entirely of free software, allowing it to be freely distributed, duplicated and passed around. Details at http://live.osgeo.org/en/index.html

Attendees will be able to interact with the speakers by sending their comments and questions through chat. All attendees of this web seminar will receive certificates for their participation.

Webinar: OSGeo Live for Education, Date: Friday, October 18, 2013, Time: 1:00 PM - 2:00 PM GMT

The schedule of webinars for this year are:

- Oct 18th, 2013 - OSGeo Live for Education (Jeremy Morley, University of Nottingham)
- Nov 7th, 2013 - Open Geo Science (Patrick Bell et al, British Geological Survey)
- Dec 10th, 2013 - Free and Open Source Software for Geospatial Applications (FOSS4G): A mature alternative in the geospatial technologies arena (Maria Brovelli and Rafael Moreno)

The webinars will also be recorded for the benefit of the wider community and made available at MundoGeo website and our new "Geo for All" website that the University of Southampton are now building (to be launched next week).

For those of you who are new to OSGeo Live and our ICA-OSGeo Education initiative Dr. Tuong Thuy Vu did an excellent presentation on "Open Source Geospatial Software, Education and Research" at the Asia Geospatial Forum in Kuala Lumpur last month.

After registering you will receive a confirmation email containing information about joining the Webinar.

System Requirements:

PC-based attendees: Required: Windows® 8, 7, Vista, XP or 2003 Server

Mac®-based attendees: Required: Mac OS® X 10.6 or newer

Mobile attendees: Required: iPhone®, iPad®, Android™ phone or Android tablet

Reserve your Webinar seat.

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PennState EDU Introduces Maps and the Geospatial Revolution Online Training

An amazing new effort from Penn State (PSU) kicks off this week in the form of a massive, online EDU offering – enter Maps and the Geospatial Revolution. In just 6-9 hours a week, students can enjoy this online offering and 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. The course is led by PSU instructor, Anthony Robinson. Geospatial Gurus may find the course a little simple but anyone else is encouraged to take part. See the course program.
Thanks to GISUser blog AND **Meet the Man Who Wants to Teach the World to Make Maps** above

UNIGIS distance learning MSc - registration open for fall 2013

Interested students and professionals from Central Asia will again have the opportunity to enhance their qualifications and to improve their career prospects: the UNIGIS MSc in 'Geographic Information Science & Systems' as well as the 'UNIGIS professional' certificate are offered via online distance learning to active professionals and graduates aiming at making GIS and Geoinformatics the basis for their current and future jobs.

The globally recognized UNIGIS qualifications are offered in Central Asia in a cooperation between the University of Salzburg's Z_GIS competence centre and the Austria-Central Asia Centre for GIScience - ACA*GIScience. Degrees and certificates are awarded from the University of Salzburg, Austria. The UNIGIS study programmes for Central Asia are based on English language online materials with support from instructors in local languages.

Registration now is open for the fall 2013 intake of students, starting in October. Enquiries and a brochure for Central Asian students is available online.

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

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.

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Funding Opportunities, Awards, Grants

Request for proposals: ICIMOD/SERVIR-Himalaya Small Grants Programme

The International Centre for Integrated Mountain Development (ICIMOD) has announced a Request for Proposals (RFP) for the SERVIR-Himalaya Small Grants Program. The goal of the programme is to help the growing the network of organizations, universities, and institutions within the Hindu Kush-Himalaya region that utilize geospatial tools and services to improve decision-making related to sustainable mountain development, with a special focus on climate adaptation, vulnerability or mitigation.
ICIMOD/SERVIR-Himalaya anticipates awarding about 10-20 grants to fund successful applications submitted in response to this RFP. Once awarded, the implementation phase of the grant will be 9-12 months, with an additional four months to closeout and final reporting. Each Project funded under this RFP will not exceed USD 25,000. ICIMOD/SERVIR-Himalaya may choose to fully fund or incrementally fund the selected application(s). Only organizations within the SERVIR-Himalayas member countries (Afghanistan, Bangladesh, Bhutan, China,

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India, Myanmar, Nepal and Pakistan) are eligible to apply (Refer to Section-3.1 of the Concept Papers Guidelines for further details).

Deadline for submitting a Concept Paper is 15 December 2013. Full proposals will be requested for the selected concept papers upon the first round of evaluations.

More information on the programme and the application process can be downloaded from ICIMOD's website. For any queries, contact.

Singapore government introduces geospatial scholarship

The Singapore government has introduced the government on Friday introduced the Singapore Geospatial Scholarship, the first of its kind in the island nation. Senior Minister of State for Law and Education, Indranee Rajah, made the announcement on Friday last week. Rajah said the scholarship would be jointly conferred by several public agencies, and will meet the increasing demand for geospatial professionals for the industry. The scholarship is for undergraduate and postgraduate studies. More information is expected to be release later in the year. Ms Indranee noted that Geospatial Information Systems and Technology (GIST) touches many aspects of daily life, such as getting road directions on the smart phone, and providing live traffic condition updates. It is also used in monitoring dengue clusters, and managing issues such as climate change and disaster response

Channel NewsAsia

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

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increasing the awareness of existing Earth Monitoring Services and their benefits to European citizens. The winner of the Best Service Challenge will benefit from a substantial satellite data quota made available with financial support by the European Commission.

T-Systems Cloud Computing Challenge

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

Challenge to spur the geospatial industry

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

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

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

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

Source: Geospatial World and SLA press release

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Employment Opportunities

New career resource (now in its second month) at **GeoJobsBIZ**. There's been about 200 opportunities listed and the growth has been steady in visits and users. If you need to recruit Geo/Tech talent hopefully you'll give it a shot and those of you simply browsing for a new gig so you can tell the boss to go take a hike perhaps there's something here for you. Good luck!

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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Spatial Data Infrastructure
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Conference Proceedings

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The 6th International Workshop on Remote Sensing and Environmental Innovations in Mongolia was co-organised by The Research Center for Climate Change Adaptation (RCCCA) of Keio University – the Asia Pacific Adaptation Network's (APAN) sub-regional node for Northeast Asia, along with the National University of Mongolia, Oxford University, and the Japan International Research Center for Agricultural Science. The workshop was held **10-11 June 2013 in Ulaanbaatar, Mongolia** and drew 98 participants from 13 countries (Belgium, Canada, China, France, India, Japan, Korea, Mongolia, Pakistan, Russia, Switzerland, United Kingdom, and United States) and eight Mongolian provinces. Participants included leaders from NGOs, governmental agency representatives, as well as academics and local community leaders.
The workshop covered a broad spectrum of topics; from global climate change and the impact of human activities, to community based adaptation and from collaboration of rural communities with scientists and policy makers, to space engineering education and the integrated application of remote sensing and GIS technology.
A special interview session was organised by the RCCCA that brought together rural community leaders and local governmental agents from Mongolia's Ministry of Environment to discuss the needs of the communities as seen from the perspective of daily life.
Taken together the sessions painted a broad picture of the needs of the local communities and the nation as a whole, as it faces large scale upheaval as a result of climate change. Existing gaps in policy and capacity were also revealed most sharply, especially with regards to the ability of Mongolia's
Ministry of Environment to measure and affect the territories it oversees as part of its mandate.
Importantly, the workshop provided an opportunity for participants to discover cutting-edge geo-information technology and applications. It allowed for the exchange of ideas, including research results, professional experiences, and future visions in the fields of environmental innovation and remote sensing and GIS applications.   View Activity Brief

2013 Esri International User Conference Paper Sessions

International Symposium on Land Cover Mapping for the African Continent - June 25-27, 2013.

3rd GMES & Africa workshop focusing on Long Term Management of Natural Resources June 25-26, 2013, in Sharm el-Sheikh, Egypt.

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Conferences, Events

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

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

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

Date	Location	Event
December 2013		
2–5 December	Bellvue, Washington, USA	**Institute of Navigation (ION) Precise Time and Time Interval Meeting**
3–6 December	Hanoi, Vietnam	**Asia-Pacific Regional Space Agency Forum (APRSAF-20)** Theme: Values from Space - 20 Years of Asia-Pacific Experiences APRSAF-20 is being jointly organized by the Vietnam Academy of

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		Science and Technology (VAST), the Ministry of Education, Culture, Sports, Science and Technology of JAPAN (MEXT), and the Japan Aerospace Exploration Agency (JAXA).
16–19 December	Ahmedabad, India	**AGSE 2013 -** "Geospatial Momentum for Society and Environment" Organizers: - Dr. Anjana Vyas (CEPT University, India) Dr. Josef Behr (Stuttgart University, Germany) **Important Dates** Last date of Abstract Submission: 20th June 2013 Last date of Full Paper Submission: 07th September 2013 End of Early Bird Conference Registration: 31st September 2013 **Contact**
2014		
April 2014		
30 March-2 April **"NEW"**	San Diego, California	**17th Annual AAAE Geographic Information Systems (GIS) Conference and Exhibition** **Speaking, sponsorship, exhibitor and Poster Session information:** greg.mamary@aaae.org **Registration and hotel information:** brian.snyder@aaae.org
7-9 April	Canberra, Australia	**Research@Locate'14** **Held in conjunction with LOCATE 14**
7-9 April	Canberra, Australia	**LOCATE 14 - Conference and Exhibition**
May 2014		
5-9 May	Geneva, Switzerland	**Geospatial World Forum 2014** **CALL for ABSTRACTS** – to be submitted by November 1, 2013 Notification of Acceptance: November 15, 2013 Contact: info@geospatialworldforum.org
21-23 May	Thessaloniki, Greece	**5th International Conference on Geographic Object-Based Image Analysis** (GEOBIA 2014).
June 2014		
15–21 June **"UPDATED"**	Riviera, Bulgaria	**5th International Conference on CARTOGRAPHY & GIS** January 10, 2014: Abstract submission February 25: Full paper submission for publication in Springer Book May 1: Full paper submission for Conference Proceedings Please be aware of the first deadline – **10 January 2014**. You are kindly asked to submit: - abstract for conference proceedings OR - **full paper** in case you would like to propose a paper for publishing in a Springer book titled "Thematic Cartography for the Society"
16–21 June	Kuala Lumpur, Malaysia	**XXV FIG Congress: Engaging the Challenges – Enhancing the Relevance** **IMPORTANT DATES** **Peer Reviewed Papers** Deadline for authors to submit **full papers:** November 1, 2013 First notification to authors of acceptance: December 19 **Non Peer Reviewed Papers** Deadline for authors to submit **abstracts:** December 1 Confirmation to authors of acceptance of **abstracts:** January 31 Call for Papers
July 2014		
1-4 July	Salzburg, Austria	**GI_Forum 2014: Geospatial Innovation for Society** **Feb 1, 2014:** deadline for submission of full papers / extended abstracts / extended abstracts for poster presentation March 16, 2014: notification of acceptance **April 20, 2014:** final paper versions June 6, 2014: late deadline for submission of extended abstracts for

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

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

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