



GeoForAll

Monthly Newsletter



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Editorial



Nikos Lambrinos
 Chief Editor
 Dept. of Primary Education
 Aristotle Univ. of Thessaloniki
 Greece

Dear members of the Network/ readers of the Newsletter,

As you may find out, this issue has almost twice as much material from the previous issues, thanks to the great job of all the co-editors and the members of our network. You can find very interesting articles, based on discussions done in February, about AgriGIS, Global School Network, the Open City Smart project, and NASA World Wind.

From these four, the newest one is the beginning of the discussion about the formation of a Global School Network. As the discussion has just started, I would like to share with you why I think there is a need of a Global Network.

First of all, this would put an order to the situation we face of many people doing things with no coordination; no “Central Instructions;” no “basic ideas” of what, when and how to do it. Most of us work at a university or a research center, and whatever we do is for the students of higher education.

In my opinion, we have to focus on the base of the educational system. It is very easy to teach university students. They know a lot of things, and it is easy to teach them, using complicated words and concepts, about spatial science. But what about the students in primary and secondary education? How can we make them understand how spatial the world in which they live is, and how can they use the tools we have constructed in order to manipulate the spatiality of our world?

We can't do this if we don't get all the help we can from their teachers. But even the teachers have different ideas about the way they can teach about this world. In fact, everything has to do with the pedagogical part of the spatial tools we use and the curriculum of each level in each country. This is why we have to work with the teachers, as they work with their students, so they can let us know what their needs are. In some cases we do have some information from published articles, but it has to be more organized and, why not, more guided.

Finally, there was an interesting telemeeting with Christopher Tucker, Chairman of the Board of Trustees, The MapStory Foundation, in which Chris let us know more about MapStory and what it can do for the teachers and students. We all hope that Chris will share with us an article on MapStory, and we will have the pleasure to publish it in a future issue.

Have a nice reading
 Nikos Lambrinos, Chief Editor.



Editorial Board

Please refer to the appropriate person according to the following table:

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GeoForAll Regional Chairs and Contact Information

North America Region

Chairs: Helena Mitasova (USA), Charles Schweik (USA), Phillip Davis (USA) Subscribe at mail list <http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-northamerica>

Email: na.gfa.chair@osgeo.org

South America Region

Chairs: Sergio Acosta y Lara (Uruguay) and Silvana Camboim (Brazil) Subscribe at mail list <http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-southamerica>

Email: sa.gfa.chair@osgeo.org

Africa Region

Chairs: Rania Elsayed Ibrahim (Egypt), Serena Coetzee (South Africa) and Bridget Fleming (South Africa) Subscribe at mail list <http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-africa>

Email: africa.gfa.chair@osgeo.org

Asia Region (including Australia)

Chairs: Tuong Thuy Vu (Malaysia/Vietnam) and Venkatesh Raghavan (Japan/India) Subscribe at maillist <http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-asiaaustralia>

Email: asia.gfa.chair@osgeo.org

Europe Region

Chairs: Maria Brovelli (Italy) and Peter Mooney (Ireland) Subscribe at mail list <http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-europe>

Email: eu.gfa.chair@osgeo.org

GeoForAll Themes

OpenCity Smart

- Chairs: Chris Pettit (Australia), Patrick Hogan (USA)
- Mail list: <http://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-urbanscience>
- Website: <http://wiki.osgeo.org/wiki/Opencitysmart>

Teacher Training & School Education

- Chairs: Elżbieta Wołoszyńska-Wiśniewska (Poland), Nikos Lambrinos (Greece)
- Mail list: geoforall-teachertraining@lists.osgeo.org
- Website: http://wiki.osgeo.org/wiki/GeoForAll_TeacherTraining_SchoolEducation

GeoForAll (GeoParaTodos) Themes in Spanish

- Chairs: Sergio Acosta y Lara (Uruguay), Antoni Pérez Navarro (Spain)
- Mail list: Spanish : geoforall-spanish@lists.osgeo.org
- Website: http://wiki.osgeo.org/wiki/GeoForAll_Spanish

CitizenScience

- Chairs: Peter Mooney (Ireland) and Maria Brovelli (Italy)
- Mail list: <https://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-geocrowd>
- Website: http://wiki.osgeo.org/wiki/Geocrowdsourcing_CitizenScience_FOSS4G

AgriGIS

- Chairs: Didier Leibovici (U.K.) and Nobusuke Iwasaki (Japan)
- Mail list: <https://lists.osgeo.org/cgi-bin/mailman/listinfo/geoforall-agrigis>
- Website: <http://wiki.osgeo.org/wiki/Agrigis>



1. Activities of the Network

- Siberian State University of Geosystem and Technologies has announced the opening of a business incubator for students based on Siberian OpenSource Geospatial Lab. More information at the [SGU GIT website](#)
- **The first meeting of Ukrainian FOSS GIS users** by *Daria Svidzinska* (go to the "Articles" session to read the article)

2. Lab of the Month

SMART Open Source Geospatial Laboratory, Australia

By Suchith Anand



Suchith Anand,
Nottingham Geospatial
Institute, University of
Nottingham, UK

Dear Geo4All Colleagues,

As I started on this "Lab of the month" series for the Geo for All newsletter, I myself started learning more and more about the excellent work that our amazing colleagues have been doing globally.

It is important that we can share these amazing ideas with all so that it keeps building more synergies. We are a global

community, and it is this global perspective which gives us strength. It is important that we highlight and share ideas from colleagues in different parts of our home planet.

Australia is an amazing country and a key leader in geospatial science, and I have always been inspired by the excellent research done by colleagues there. In November 2013, I was part of a European Union delegation on Research Infrastructure to visit Canberra during events hosted by the Department of Education of the Australian Government. The Third European Union-Australia workshop and meetings on Research Infrastructure was held in the [Australian Academy of Science](#), Canberra (5-6 Nov 2013), and focused in the

areas of healthy ageing, clean energy, and sustainable cities, with a cross cutting theme on industry links. The details of the **Joint European Commission- Australian Government Communique** are available [here](#).

It is my great pleasure to introduce our colleagues at the SMART Open Source Geospatial Laboratory, University of Wollongong, Australia, as our "Geo4All" lab of this month whose research reminded me of the essence of these Joint European Commission-Australian Government agreements and spirit of working together for enabling research which focuses on global scale challenges and opportunities.

SMART's Open Source Geospatial Lab is undertaking a number of research projects that are centered on the use and development of free and Open Source Geospatial software to assist government, business, and the community in responding to infrastructure problems and creating solutions for the future.

I was impressed to read about the excellent research projects, and I see synergies with the [OpenCitySmart](#) thematic of Geo4All. For example, the [PetaJakarta Project](#) is a University of Wollongong Global Challenges Project that addresses the challenge of [Sustaining Coastal and Marine Zones](#). The project is supported financially by the SMART Infrastructure Facility, the Faculty of Engineering and Information Sciences, the University of Wollongong Global Challenges Strategic Fund and Project Fund, and the University of Wollongong's Innovation and Research Development Fund. The PetaJakarta project develops novel techniques and methods to better understand the response of complex urban systems to change, to promote new open source technological solutions to emergent problems within complex urban systems, and to theorize these innovations through scholarly publications and conference presentations. A critical component of this research is understanding the interactions between society and infrastructure in order to quantify the response of cities to a range of risk scenarios in a probabilistic manner. This understanding will be derived from the analysis of data collected through their GeoSocial Intelligence Framework, which uses a public, web-based interface to display crowdsourced, geolocated information.

The **SMART Infrastructure Dashboard (SID)** is an integrated solution for local governance of infrastructure. SID is a data portal, and this dashboard acts as 'one-stop-shop' portal for accessing, formatting, analysing, and making publicly available information on water, energy, waste, communication, and networks of transport distribution or management in a given area.



It will allow analysts to develop new insights into spatial, technical, social, and economic issues associated with regional and urban development.

Another research project I found very interesting is their **TRANSMOB: A micro-simulation model for integrated transport and urban planning project** which looks into how current socio-demographic evolution affects future transport patterns and traffic conditions, as well as the influence of urban development and transport policy on the quality of life of various segments of the local community. The 'Shaping the Sydney of Tomorrow' (StSoT) Project was commissioned by Transport for NSW (Australia) to better understand the interactions between transport and land-use dynamics as experienced by individuals and households over extensive periods of time (15-20 years). Stepping away from traditional optimisation, their model focuses on anticipating short and long-term emergent consequences and feedbacks resulting from interactions between people and their urban environment through the creation of 'what-if' scenarios (risk assessment approach).

In addition to its research, the SMART OSGeo Lab takes on an active role in mentoring and providing hands-on experience for UOW students to assist them in gaining key skills in using open geospatial technologies. SMART's OSGeo lab took 20 UOW students on a study tour to Jakarta. Selected students gained valuable experience, training, and education by working directly with the Jakarta Emergency Management Agency and the PetaJakarta team, as well as participating in workshops with the United Nations Pulse Lab Jakarta, the Humanitarian Open Street Map team, the Jakarta office of Twitter, and a number of community organisations and local institutions.

Details at the [UOW OSGeo website](#)

We are confident that the momentum created by our colleagues in Australia will spread to more universities in the world and benefit thousands of students in the future. On behalf of the Geo4All community, we thank Dr. Tomas Holderness, Dr. Rohan Wickramasuriya, Dr. Etienne Turpin, Robert Ogie, and all colleagues of the University of Wollongong for their help and their contributions to the Geo4All initiative, and we look forward to working and building more collaborations with all interested on this education mission.

Open principles in geoeducation (open educational resources, free and open software, open data, open standards, etc.) are key for true empowerment of staff and students globally and making geospatial education and opportunities accessible to all. Access to quality

education and opportunities is key for getting rid of extreme poverty and enabling broadly shared prosperity for all.

Best wishes,
Suchith Anand

3. Events

1. CODATA-RDA School of Research Data Science.

Venue: Abdus Salam International Centre of Theoretical Physics, Trieste, Italy.

Date: 1-12 August 2016. Details [here](#). Deadline for applying is 18th April 2016.

2. GeoBigData one day workshop by RDA Geospatial IG.

Venue: Nottingham University

The aim of this workshop is to bring together key research leaders working in this area to discuss and plan the research agenda and future research collaborations. It will also link **OpenCitySmart research** collaborations. Limited to 30 people.

Date: June, 8, 2016. For more details write to Suchith Anand [Suchith.Anand@nottingham.ac.uk]

3. Interexpo GEO-Siberia 2016.

From 17 to 26 April 2016, International Society for Digital Earth, Siberian State University of Geosystems and Technologies, and M. V. Lomonosov Moscow State University will be offering a series of joint scientific events held within XII International Exhibition and Scientific Congress "Interexpo GEO-Siberia 2016" in Novosibirsk.

Among the scientific events are:

- International Seminar "Digital Earth role in sustainable development of territories influenced by significant global climate changes"
- VII International Workshop "Early Warning and Crises Management in the Big Data Era"
- International Student and Young Researcher Summer School "GI Support of Sustainable Development of Territories in the Conditions of Global Climate Change"

For more information:

- <http://sgugit.ru/en/geo-siberia/>
- <http://sgugit.ru/en/geo-siberia/GEO-Siberia-2016-Brochure.pdf>
- [Expo-Geo](#)



4. [California OSGeo Annual Meeting](#) for 2015 was held on January 23 at UC Davis. Information about the meeting, including links to presentation slides, are available at the link.

4. Conferences

Asia

March 2016

1. 2-4 March, 2016. International Conference on Radar and Imaging Technology (ICRIT 2016). Beijing, China. www.engii.org/conf/ICRIT/2016Mar/

April 2016

2. 20-22: Interexpo GEO-Siberia-2016

XIIIth International exhibition and scientific forum "Interexpo GEO-Siberia-2016" organized by the Siberian State University of Geosystems and Technologies and ExpoGeo LLC.

More details at <http://www.expo-geo.com/#/english/ap2t9>. Most of the site is in Russian but those who are interested can find persons to contact with (Mrs Argina Novitskaya – email: argina@mail.ru, argina@gmx.de).

July 2016

3. 25-27 July, 2016. International Conference on Surveing, Mapping and GeoInformation (ICSMG 2016). Suzhou, China. More details at <http://www.engii.org/ws2016/Home.aspx?id=754>

Europe

April 2016

4. 17-22 April, 2016. [EGU General Assembly](#), Vienna, Austria.

May 2016

5. 24-29 May 2016: 10th Spanish FOSS4G & 2nd edition of the International QGIS User and Developer Conference as well as QGIS Hack Fest in Girona, Spain. So, a whole week to teach and learn about Free and Open Source Geospatial Technologies. More details at

<http://www.sigte.udg.edu/jornadassiglibre/en/>

6. 25-27 May 2016: The 14th International Conference of the Geological Society of Greece, in Thessaloniki, northern Greece. The conference addresses all subjects of Earth Sciences: GIS, geoinformatics,

Remote Sensing, etc. More details in www.ege2016.gr.

7. May 30 – June 3: Under the auspices of the 2016 Dutch Presidency of the European Council, this major 5-day conference is coming to The Hague, The Netherlands. Taking place at the World Forum Convention Centre from 30 May to 3 June 2016, **European Space Solutions** will bring together business and policy makers with users and developers of space-based solutions. Don't miss the opportunity to learn about innovations that harness information from the European flagship space programmes, Galileo and EGNOS (satellite navigation) and Copernicus (Earth observation), and the EU's Horizon 2020 research programme. Opportunities for a wide range of applications and services, gathering insights about current developments, and discussing what is possible and needed in the future. More details in www.european-space-solutions.eu.

June 2016

8. 21-24 June 2016: International conference and a series of workshops entitled: "GeoMLA: Geostatistics and Machine Learning Applications in Climate and Environmental Sciences", at the University of Belgrade - Faculty of Civil Engineering Belgrade, Serbia. More details in <http://geomla.org>

The Conference will take place on June 23-24, the workshops on June 21-22.

April 15th 2016 - early registration deadline.

July 2016

9. 5-8 July: GI-Forum: [open: spatial: interfaces](#) Symposium and Exhibit - Geographic Information Science University of Salzburg, Salzburg, Austria.

10. 12-19 July 2016: ISPRS XXIII Congress, in Prague. More details at <http://www.isprs2016-prague.com/>. There are two sessions of particular interest by our community:

a) Special Session: SpS10 - FOSS4G: FOSS4G Session (chairs: Maria A. Brovelli, Helena Mitsova, Krishnan Sundara Rajan)

Keywords: Free and Open Source Software for Geoinformatics (FOSS4G), geospatial research platform and systems for developing new applications crossing the new frontiers towards the Internet of Places, Big Geospatial Data processing and analytics, and complex simulations essential for understanding



and managing the earth systems, human societies, and their interaction

b) Theme session: THS16: Recent Developments in Open Data

(chairs: Maria A. Brovelli, Hae-Kyong Kang, Hiroichi Kawashima)

Keywords: Open data, Linked open data, e-Government, Geospatial, Web

For those who need more information may contact Maria Brovelli (maria.brovelli@polimi.it)

c) Session THS17: Smart cities

(Chairs: Chris Pettit & Arzu Coltekin)

keywords: Geodesign, urban planning, visualisation and spatial analysis of urban phenomena, energy use, walkability, pollution, health, infrastructure, population, aging.

August 2016

11. 24-26 August: FOSS4G Conference, Bonn, Germany. Deadline for paper submission is March 21th 2016. See the [Call for Papers](#).

September 2016

12. 12-14 September: [Earth Observation Open Science 2016 Conference](#)

Frascati, Italy.

Deadline for Abstracts: May 15.

October 2016

13. 12-16 October: [Open Source Geospatial Research and Education Symposium 2016](#)

Venue: Palazzo Cesaroni - Piazza Italia, Perugia, Italy.

Registration opens: March 15, 2016

Deadline for short papers (1000 to 1500 words): April 15, 2016.

North and Central America and the Caribbean

March 2016

14. 19-20 March: [LibrePlanet](#)

Boston, Massachusetts, USA.

April 2016

15. 4-7 April: [2016 Intermountain GIS Conference](#)

Great Falls, Montana, USA

May 2016

16. 2-5 May: [FOSS4G North America](#)

Raleigh, North Carolina, USA.

17. 10-12 May: CalGIS [2016: 22nd Annual California GIS Conference](#)

Anaheim, California, USA.

18. 25-26 May: [Upper Midwest Geospatial Conference \(UMGEOCON\)](#)

La Crosse, Wisconsin, USA.

June 2016

19. 7-9 June: [37th Canadian Symposium on Remote Sensing and the 41st Canadian Cartographic Association Conference](#)

Richardson College for the Environment at the University of Winnipeg, Winnipeg, Manitoba, Canada.

20. 15-17 June: [Cities and Regions: Managing Growth and Change](#)

Georgia Institute of Technology, Historic Academy of Medicine Building, Atlanta, Georgia, USA.

July 2016

21. 26-28 July: [Third International Conference on CyberGIS and Geospatial Data Science](#)

Urbana, Illinois, USA.

August 2016

22. 1-3 August: [World Congress on GIS and Remote Sensing](#)

New Orleans, Louisiana, USA.

Abstract submission and registration currently open.

September 2016

23. 5-8 September: [URISA Caribbean GIS Conference Barbados](#)

Super-early registration deadline is 1 April.

24. 11-17 September: [International Data Week \(IDW\)](#)

Venue: Denver, Colorado, USA.

The theme of this landmark event is **'From Big Data to Open Data: Mobilizing the Data Revolution'**

25. 11-16 September: [Research Data Alliance Plenary 8](#)

Denver, Colorado, USA (within International Data Week).

26. 14-16 September: [AutoCarto 2016](#)

Albuquerque, New Mexico, USA.

Early registration discounts end August 1, 2016.

In addition, the ICA Commission of Open Source Technologies will hold a one-day workshop there on September, 14th



October 2016

27. 2-5 October: [69th Canadian Geotechnical Conference](#)

Vancouver, British Columbia, Canada.

28. 31 October- 3 Nov: [GIS-Pro 2016: URISA's 54th Annual Conference](#)

Toronto, Ontario, Canada.

Abstract submissions are due March 15.

South America

March 2016

29. 14-18 March: Third Call to participate in the “[9th International Congress of Geomatics](#)” GEOMÁTICA 2016 to be held in Havana, Cuba. GEOMÁTICA 2016 will be held as part of the 16th International Convention and Fair Informática 2016, which this year has the theme "Connecting Societies" Important!!! Send the papers. We count on your participation.

<http://www.informaticahabana.cu/en/eventos/show/91>

Tercera Circular para participar en el IX Congreso Internacional de Geomática, que tendrá lugar en La Habana Cuba, del 14 al 18 de Marzo del 2016. GEOMÁTICA 2016 se desarrollará en el marco de la XVI Convención y Feria Internacional Informática 2016, que en esta Edición tiene como tema central “Conectando Sociedades” Importante!!! Enviar las Ponencias. Contamos con su participación.

<http://www.informaticahabana.cu/eventos/show/91>

April 2016

30. 5-9 April: [FOSS4G Argentina](#). Supported by OSGeo and the gvSIG Association FOSS4G Argentina Open/Free Geomatics Conference will be held at the National Institute of Geography (Buenos Aires, Argentina).

Organizada por Geoinquietos Argentina y el Instituto Geográfico Nacional (IGN) de la República Argentina y con el apoyo de OSGeo y la Asociación gvSIG se realizará la Conferencia FOSS4G Argentina de Geomática Libre. La misma tendrá lugar en el propio IGN (Buenos Aires, Argentina) del 5 al 9 de abril.

June 2016

31. 23-24: [XI IDERA Conference](#). The XI IDERA (Spatial Data Infrastructure of Argentina) Conference will be

held in the city of Neuquen, Province of Neuquen. The deadline for submission of entries is March 30, 2016.

Los días 23 y 24 de junio de 2016 se realizarán las XI Jornadas de IDERA en la ciudad de Neuquén, Provincia del Neuquén. El plazo para la presentación de los trabajos será el 30 de marzo de 2016.

6. Courses

- [Triangle Area GIS](#) is a “collaboration site for multidisciplinary GIS users in the Triangle” area of North Carolina. They offer free webinars throughout the year in many GIS and mapping areas, as well as paid training and group meeting planning space.
- Certificate Program in QGIS at Langara College in Vancouver, British Columbia, Canada.

Langara College will be starting a new 5 course certificate program in Geographic Information Systems using QGIS and other FOSS software, starting January 2016.

The courses are:

GISC 1001 - Intro to Geospatial Technology using QGIS

Explore the world of geographic information systems (GIS) with QGIS, an Open Source software program that offers a free, but powerful, alternative to commercial GIS programs. Topics include symbology, raster and vector data models, and map composition. The course also provides background theory of GIS concepts such as projections and geocoding.

GISC 1002 - Spatial Analysis using QGIS

Gain proficiency at using analysis techniques to solve problems that are commonly found in the GIS field. Practice exercises will include both vector and raster data models. These techniques are applicable to a wide range of disciplines.

GISC 1003 - Data Acquisition and Management using QGIS

Explore the world of geographic information systems (GIS) with QGIS, an Open Source software program that offers a free, but powerful, alternative to commercial GIS programs. Topics include symbology, raster and vector data models, and map composition. The course also provides background theory of GIS



concepts such as projections and geocoding. This is a hands-on course, no programming required.

GISC 1004 - Intro to Cartography using QGIS

Explore fundamental concepts in cartography. Successful students will be able to employ design principles to create and edit effective visual representations of data in different formats. Specific topics include the ethical and appropriate application of map scale, map projections, generalization, and symbolization.

GISC 1005 - Intro to Remote Sensing using QGIS

Explore the world of remote sensing. Topics include the physical principles on which remote sensing is based, history and future trends, sensors and their characteristics, image data sources, and image classification, interpretation, and analysis techniques.

For more information please see:

<http://langara.ca/news-and-events/langara-news/2015/151120-geographic-information-systems-launch.html>.

- gvSIG application to urban planning (workshop Video):

<http://blog.gvsig.org/2016/01/15/gvsig-application-to-urban-planning/>

Taller de gvSIG aplicado a urbanismo (Vídeos):

<http://blog.gvsig.org/2016/01/14/taller-de-gvsig-aplicado-a-urbanismo-videos/>

7. Training programs

- MOOC scripting: <http://web.gvsig-training.com/index.php/es/quienes-somos-2/noticias-2/140-massive-online-open-course-de-introduccion-a-scripting-en-gvsig-2-1>

Massive Online Open Course (MOOC-free and continuously open enrollment) about "Introducción a Scripting en gvSIG 2.1" 2nd. edition (Spanish only).

Curso Abierto Masivo en línea (MOOC-modalidad de inscripción gratuita y abierta continuamente) de "Introducción a Scripting en gvSIG 2.1" 2a. edición (en español solamente).

- GeoForAll educational inventory system, a place

where to search and share educational materials: http://www.osgeo.org/educational_content.

- Registration for online gvSIG -Training courses is now open. They are part of the courses offered by the Certification Program of the gvSIG Association. Unlike previous editions, the registration mode is open for most of the courses, so students can enroll and start the course at any time they want. The courses currently available are:

General gvSIG courses (1)

Applied gvSIG courses (5)

Geoprocessing and Spatial Analysis courses in Spanish and Portuguese (5 in Spanish, 5 in Portuguese)

gvSIG extensions/addons (6)

Geospatial DataBases (1)

Free i3Geo course (1)

By participating in any of these courses you get credits for the gvSIG Certification Program that allows you to qualify for "gvSIG User" and "Expert gvSIG User" certification. More information [here](#).

Ya están abiertas las inscripciones para los cursos a distancia de gvSIG-Training, que forman parte de la oferta del Programa de Certificación de la Asociación gvSIG. A diferencia de las convocatorias anteriores, la modalidad de inscripción pasa a ser de matrícula abierta para la mayoría de los cursos, por lo que el alumno podrá matricularse y comenzar el curso cuando lo desee. Los cursos disponibles actualmente son:

Cursos gvSIG general (1)

Cursos gvSIG aplicado (5)

Cursos Geoprocesamiento y Análisis Espacial, en español y portugués (5 en español 5 en portugués)

Extensiones gvSIG (6)

Bases de Datos Geoespaciales (1)

Curso i3Geo gratuito (1)

Al participar en cualquiera de estos cursos obtienes créditos del programa de certificación gvSIG que te permite optar a la certificación "gvSIG Usuario" y "gvSIG Usuario Experto".

Más información [aquí](#)



- March 14, 2016. "Geospatial Information for United Nations," seminar by Mr. Kyoung-Soo Eom, Chief of the UN Geospatial Information Section. In his presentation, he will describe in detail:
 1. What are the geospatial information and service requirements for United Nations operations?
 2. How geospatial information and services are supported for United Nations operations.
 3. Collaboration and partnership as well as vision, "Geo-enabled UN operations."

Detailed information (and registration, for those of you who are able to join) is available at [\[https://www.eventi.polimi.it/#geospatial\]](https://www.eventi.polimi.it/#geospatial). The video recording of the seminar will be made available after the event (by Marco Minghini, Ph.D.GEOlab, Politecnico di Milano - Como Campus).

- April 2-3, 2016. [CyberGIS Curriculum Workshop](#) for Synthesizing Education Materials, sponsored by the National Science Foundation, will take place in San Francisco, California, USA.
- June 21-22, 2016: "GeoMLA: Geostatistics and Machine Learning Applications in Climate and Environmental Sciences".
University of Belgrade - Faculty of Civil Engineering Belgrade, Serbia.
Three parallel workshops (21-22 June 2016):
Mikhail Kanevski: "Machine learning of geospatial data: achievements and new trends"
Tomislav Hengl: "Automated mapping in 2D, 3D, and 2D+T using machine learning"
Milan Kilibarda: "Spatial and spatio-temporal prediction and visualization of climate elements in R"
For registration go to <http://geomla.grf.bg.ac.rs/>
- July 25-26, 2016. **NSF Workshop on Geospatial Data Science in the Era of Big Data and CyberGIS**
Venue: Urbana, Illinois, USA.

The primary goal of this workshop is to bring together thought leaders and cutting-edge researchers from pertinent multidisciplinary communities to explore the frontiers of geospatial data science. Specifically, the two-day workshop aims to:

- ✓ Introduce geospatial big data capabilities (e.g., LiDAR, remote sensing, and location-based social media) for novel applications (e.g., urban

sustainability and interdisciplinary studies);

- ✓ Demonstrate cutting-edge cloud computing and cyberGIS tools for scalable spatial data synthesis and enhancing knowledge discovery power based on geospatial big data;
- ✓ Identify spatial data synthesis requirements from representative science drivers;
- ✓ Formulate a core set of questions and problems of geospatial data science; and
- ✓ Discuss foundations and principles of geospatial data science.

8. Key research publications

- Call for Papers: Special Issue entitled "Spatial Ecology," to be published in the ISPRS International Journal of Geo-Information, (ISSN 2220-9964).

The submission deadline is 31 May 2016. Submitted papers should not be under consideration for publication elsewhere. We also encourage authors to send a short abstract or tentative title to the Editorial Office in advance (ijgi@mdpi.com).

For further reading, please follow the link to the Special Issue Website at:

http://www.mdpi.com/si/ijgi/spatial_ecology.

10. New free and open software, open data, etc.

1. Data generated by IGN of Spain is now Open Data: <http://blog-idee.blogspot.com.uy/2015/12/los-datos-del-ign-ya-son-datos-abiertos.html>

On Saturday December 26, it was published in the BOE (Official Newsletter of Spain) Ministerial Order FOM/2807/2015 an announcement that the new Policy of Public Dissemination of the information generated by the National Geographic Institute (IGN) of Spain is approved.

El pasado sábado día 26 de diciembre se publicó en el BOE la Orden Ministerial FOM/2807/2015, de 18 de diciembre, por la que se aprueba la nueva política de



difusión pública de la información generada por el Instituto Geográfico Nacional de España.

2. New Stable release of GRASS 7.0.3

The new GRASS GIS 7.0.3 release provides **210 stability fixes and manual page improvements** compared to version 7.0.2. Of particular interest is the **new winGRASS 64 bit support**.

About GRASS GIS 7: Its graphical user interface supports the user to make complex GIS operations as simple as possible. The [updated Python interface to the C library](#) permits users to create new GRASS GIS-Python modules in a simple way while yet obtaining powerful and fast modules. Furthermore, the libraries were **significantly improved for speed and efficiency**, along with support for [huge files](#). A lot of effort has been invested to standardize parameter and flag names. Finally, GRASS GIS 7 comes with a series of **new modules** to analyse raster and vector data, along with a full temporal framework. For a detailed overview, see the list of [new features](#). As a stable release series, 7.0.x enjoys **long-term support**.

3. New version of [QuickMapServices](#).

QuickMapServices is a QGIS plugin for painless adding basemaps as layers.

4. GreenPeace of Russia published forest "hot points" map (in Russian).

Looking at this map, the user can understand quickly which areas are at risk and need special care, and which - have become "hot spots". Areas marked in green correspond to the areas where forests are changing relatively slowly. Yellow indicates a mild rate of change. Red - are areas where the wood is used or is lost too rapidly.

<http://m.greenpeace.org/russia/ru/high/news/2016/01-18-forest-map/>

http://www.forestforum.ru/info/SRRI_map_rus.pdf

5. Geofabrik's free download server.

This server has data extracts from the [OpenStreetMap project](#) which are normally updated every day. Select your continent and then your country of interest from the list at <http://download.geofabrik.de/>.

Choose the continent and then the country.

6. New version of NextGIS Mobile is out! NextGIS Mobile 2.3: layer creation, tracks export, multipart geometries

New version of [NextGIS Mobile](#) is out! NextGIS Mobile is our GIS app that allows you work with geodata on your smart devices. New version features layer creation, tracks export, support for multipart geometries and much more.

7. OSMInfo

Tired of trying to figure out what you're seeing on the map? Ever wondered what are the actual data for a feature on [OSM Mapnik|MapQuest|your favorite OSM basemap]? [OSMInfo](#) is the answer. It shows information about objects from OpenStreetMap using Overpass API.

More information at

<http://nextgis.ru/en/blog/osminfo/>

8. gvSIG 2.3 RC1

(English) <http://blog.gvsig.org/2016/02/26/gvsig-2-3-rc1-available-release-candidate-to-final-version/>

The first gvSIG 2.3 RC (Release Candidate) is now available. As most of you know, odd gvSIG versions have changes in a functional level, but also in an architecture level, so it implies a more detailed testing to identify all the possible errors. We ask for your help to test and refine this distribution to have the final one as soon as possible.

(Español) <http://blog.gvsig.org/2016/02/26/disponible-gvsig-2-3-rc1-distribucion-candidata-a-final-2/> Ya está disponible la primera RC (Release Candidate) de la versión 2.3 de gvSIG. Como muchos de vosotros ya sabréis, las versiones impares de gvSIG conllevan cambios no sólo a nivel funcional, sino que también se realizan cambios a nivel de arquitectura de la aplicación, lo que implica un testeo más profundo para identificar todos los posibles errores. Por ello os pedimos vuestra ayuda para testear y depurar esta versión de cara a tener lo antes posible la final.

9. gvSIG Roads

(English) <http://blog.gvsig.org/2016/01/15/gvsig-roads-roads-management-with-open-source-software/> Roads management with open source software

(Español) <http://blog.gvsig.org/2016/01/13/gvsig-roads-gestion-integral-de-carreteras-con-software-libre/> Solución integral, que permite la gestión de las infraestructuras viarias tanto desde su componente alfanumérica como geográfica, basada en estándares y software libre.



10. gvSIG Educa:

(English) <http://blog.gvsig.org/2016/01/16/gvsig-educa-a-free-gis-education-prototype/> Free GIS for education Prototype

(Español) <http://blog.gvsig.org/2016/01/11/gvsig-educa-prototipo-de-un-sig-libre-para-educacion/> Prototipo de un SIG libre para educación.

11. gvSIG Online

(English) <http://blog.gvsig.org/2016/02/17/presenting-gvsig-online-the-solution-for-spatial-data-infrastructures-on-open-source-software/> A solution for Spatial Data Infrastructures on Open Source software

(Español) <http://blog.gvsig.org/2016/02/16/presentando-gvsig-online-la-solucion-a-las-infraestructuras-de-datos-espaciales-con-software-libre/> gvSIG Online es una plataforma integral para la implantación de Infraestructuras de Datos Espaciales (IDE), 100% con software libre. Una solución rápida y potente para poner en marcha la infraestructura necesaria para gestionar de la forma más eficiente los datos espaciales de una organización. Con gvSIG Online podrás fácilmente compartir tu información geográfica en la nube, generar mapas y aplicaciones gracias a las sencillas y potentes herramientas de administración del sistema. Bases de datos, geoportales, app móvil, SIG Desktop... todos los componentes en una solución integral, libre e interoperable.

12. Articles

Abbreviations

by **Nikos Lambrinos**, Chief Editor

Department of Primary Education, Aristotle University of Thessaloniki, Greece

For those who would like to support this effort, please send any abbreviations to the Chief Editor (labrinos@eled.auth.gr).

AAG: Association of American Geographers

AGS: American Geographical Society

AM/FM: Automated Mapping/Facilities Management

ASPRS: American Society for Photogrammetry and Remote Sensing

AURIN: Australian Urban Research Infrastructure Network

CAD: Computer Aided Design

CLGE: The Council of European Geodetic Surveyors

COGO: Coordinate geometry

CRS: Coordinate Reference System

DAAC: Distributed Active Archive Center (of NASA)

DEM: Digital Elevation Model

DWG: Design file format

DXF: Drawing Interchange File

ECMWF: European Center for Medium range Weather Forecasting

EOS: Earth Observation Science

EOSDIS: Earth Observing System and Data Information System

EPSG: European Petrol Survey Group (used in projection IDs)

ESA: European Space Agency

EUROGI: European Umbrella Organisation for Geographic Information

FOSS: Free and Open Source Software

FOSS4G: Free and Open Source Software For Geospatial

GCP: Ground Control Point

GloFAS: Global Flood Awareness System

GNSS: Global Navigational Satellite System

GPS: Global Positioning System

GPX: GPS Exchange Format

HOT: Humanitarian OpenStreetMap Team

ICA: International Cartographic Association

ICSU-WDS: International Council for Science – World Data System

INSPIRE: Infrastructure for Spatial Information in Europe

ISPRS: International Society for Photogrammetry and Remote Sensing

KML: Keyhole Markup Language

LiDAR: Light Detection and Ranging



LOC: Local Organizing Committee
 LOD: Level Of Detail
 MoU: Memorandum of Understanding
 NAD: North American Datum
 NGA: National Geospatial Intelligence Agency
 OER: Open Educational Resources
 OGC: Open Geospatial Consortium
 OSGeo: Open Source Geospatial Foundation
 OSM: OpenStreetMap
 RCMRD: Regional Centre for Mapping of Resources for Development
 SDI: Spatial Data Infrastructure
 SQL: Structured Query Language
 STSM: Short Term Scientific Missions
 TIN: Triangulated Irregular Network
 UAV: Unmanned Aerial Vehicle
 USGIF: United States Geospatial Intelligence Foundation
 WCS: Web Coverage Service
 WFS: Web Feature Service
 WGS: World Geodetic System
 WMS: Web Map Service
 WMTS: Web Map Tiles Services
 WPS: Web Processing Service

FOSS workshops for Tanzanian Park

Ecologists



Clara Tattoni, PhD
 Forest Ecology Lab
 DICAM, University of Trento, Italy
 IcaGeoLab #20
<http://www.geoforall.org/>

Dear readers,

The aim of this article is to share with the Geo4All community the experience and lessons learned from teaching FOSS4G in Tanzania, Africa.

Since 2011, Marco Ciolli from the Forest Ecology Lab of the University of Trento [1] together with Francesco Rovero and me from the Tropical Biodiversity

Department of the Science Museum of Trento [2] have been holding a summer school at the The Udzungwa Ecological Monitoring Centre (UEMC [3]), a field station located in the Udzungwa Mountains National Park, Tanzania.

The Eastern Arc mountain range, where the Udzungwa Mountains belong, is also known as the "Galapagos of Africa" because of the diversity of species of plants and animals that can only be found there.

Monitoring the biodiversity of this place is crucial because you cannot conserve what you do not know. Thus it is of great importance that local ecologists can use state of the art tools and standardized methods for wildlife monitoring and plant inventories.



The Udzungwa red colobus is endemic of the area.
 Photo by Sebastian van der Hoek

The summer school, entitled "Tropical rain forest biodiversity: field and GIS tools for assessing, monitoring and mapping"[4], covers a range of topics, but I will focus on the mapping side of the educational content, which is based indeed on FOSS4G, especially QGIS and GRASS.

The choice of using FOSS4G was natural because of the teachers' backgrounds (Marco Ciolli and myself), because of the power of the FOSS4G tools, because we believe in the importance of sharing, and also because of the belief that not having to pay the costly licenses of proprietary GIS could be helpful in a developing country (but we were wrong about the latter).

People from all over the world have been attending the various editions of the school in which some places were always reserved for students and professionals from Tanzania, who are admitted without paying the fees.



During the first edition in 2011, the training we offered was limited to the attendance of some Tanzanian National Park (TANAPA [5]) ecologists. Once they tasted the possibilities of FOSS, they wanted more. In February 2012, the Udzungwa National Park spontaneously asked the GIS expert Nick McWilliam (of Map Action and Anglia Ruskin University, Cambridge) to give a workshop about QGIS [6].



*Workshop with the Tanzanian Ecologists.
Photo by Francesco Rovero*



*QGIS practicals during the summer school.
Photo by Francesco Rovero*



*The 2012 Edition.
Photo by Marco Ciolli*

In August 2012, at the end of the two weeks of school, we offered an additional one day workshop dedicated to the local ecologists, where we worked together to tailor the applications of QGIS and GRASS to their work needs, especially regarding data collection, GPS surveys, and printing.

To consolidate these efforts, we organized a 4-day workshop in August 2013 for all forest park ecologists of TANAPA. The ultimate goal of the training was to assess in a participatory way the current monitoring programmes in forest parks, review their effectiveness, and propose new and standardized monitoring programmes that can inform the park management on wildlife trends in order to propose solutions [7]. After the workshop, the TANAPA GIS unit decided to store all the data from the project in an Esri GEODB because they were more familiar with it, but they designed it to assure the compatibility with QGIS.

In summer 2015, we repeated the one day dedicated training after the summer school.

Among the Tanzanian ecologists we met a variety of people with different GIS backgrounds and skills. People from the TANAPA GIS unit tend to be proficient Esri users who have been offered training (even in the USA) and licenses at the expenses of this company and therefore are strong supporters of this proprietary GIS. Other ecologists were already familiar with QGIS and have tried to use it, for others it was new, and GRASS was pretty much unknown.

The attendees of our workshops reported that they can easily get any software they need, and the cost of the licenses is not perceived as a problem. Actually, in a previous GIS training experience we carried out in Rwanda in 2010, the participants showed a very similar attitude.

What made FOSS appealing for them, especially QGIS, was the possibility to run it on a relatively old PC, with limited RAM or processors, while proprietary solutions are usually very demanding in terms of memory and processors to run smoothly. Most of the people appreciated the easy installation, the friendly GUI of QGIS, the GPS tools, and the easy printing system compared to proprietary GIS.



The Esri power users appreciated the large amount of possibilities offered by GRASS and perceived it as a tool that can expand their processing capabilities.

If you plan to use FOSS4G in a developing country, consider using a virtual machine and bringing along a copy of the packages you would like to install, so that you can eventually just update them when you are there. Internet connection and power cuts can be big constraints. The OSGeo4W is a terrific tool that could also be used with locally stored files.

Teaching at the summer school and at the dedicated workshops has been an empowering experience for me. In the first place, it gave me a new perspective about the importance of FOSS in different work environments. I also believe that the training that we offered had indeed enabled more Tanzanian ecologists to perform their daily work with state of the art FOSS GIS tools, even on relatively old computers, and therefore helped the local community to look after their astounding biodiversity.

References

- [1] <http://web.unitn.it/en/dicam/7795/forest-ecology-presentation>
- [2] <http://www.muse.it/it/La-Ricerca/Biodiversita-tropicale/Pagine/Biodiversita-tropicale.aspx>
- [3] <http://www.udzungwacentre.org/>
- [4] <http://www.muse.it/it/la-ricerca/biodiversita-tropicale/proposte-formative/pagine/summer-school-2015.aspx>
- [5] <http://www.tanzaniaparks.com/>
- [6] <http://udzungwa.wildlifedirect.org/category/partners/>
- [7] "Rovero F., Kibasa W., Kiwango Y., Maanga W.F., Mwinuka C., Mtui A., Ng'umbi G., Ponjoli J., and Ciolli M. (2014). Biodiversity monitoring techniques and standardization across TANAPA forest parks: report of a training workshop for Park Ecologists. Unpublished report, Tanzania National Parks." available at http://www.udzungwacentre.org/documents/Reports/TANAPA_Udzungwa_ecologists_workshop_2013.pdf



NASA World Wind vs. Google Earth, Esri, and Cesium

by **Patrick Hogan**, [patrick.hogan@nasa.gov]
 NASA World Wind Project Manager
 NASA Ames Research Centre

NASA has been building virtual globe technology longer than any other enterprise on the planet today. Before Google Earth there was NASA World Wind. Our mission has been to support the operational needs of the geospatial community. By way of contrast, Google Earth (GE), Esri's ArcView, and now AGI's Cesium necessarily implement business models. They do not have the record, experience, or practical focus of NASA World Wind and its extensible architecture.

Google Earth and World Wind are different in that World Wind is an API, and Google Earth is an application. World Wind can be plugged into any application that needs virtual globe capability. Applications can add virtually any 2D or 3D information to the virtual globe in response to the user. Google Earth does not provide application interaction. A user runs the Google Earth application, and there is no provision for adding additional interactive functionality other than importing KML. Since World Wind also supports KML, it can provide that same visualization capability.

World Wind applications use World Wind because Google Earth does not provide the ability to be built into an application. There are now many World Wind applications, but only one Google Earth application. World Wind is also open-source and can be extended by users, and very often is. Many World Wind users add application-specific functionality.

For example, World Wind provides line-of-sight capability, which Google Earth does not. This can be used to compute regions for range-of-influence and measure-of-effectiveness. World Wind also provides direct access to its elevation and imagery data. Google Earth does not. Google Earth is a completed application that only provides the ability to load and display data packages. World Wind is an API that allows applications to do what Google Earth does plus dynamic visualized computed information — such as line-of-sight, area of influence, and other sophisticated measurements — and behaviors.



Here is text from the CSRCI International Research and Development Centre 2015 survey,

<http://www.crcsi.com.au/assets/Resources/Globe-review-paper-March-2015.pdf> :

"One preliminary finding is that if there is a preference to use a completed application targeted at end users that only requires the creation of a data package to produce the globe, then Google Earth may provide the best option. If there is a preference to use an open-source platform on which to build and customise a globe via the source code, then either Cesium or World Wind may provide the best option."

Esri provides a proprietary and very expensive suite of tools, but it does not provide a virtual globe API. It does provide an application similar to Google Earth, but it is slow and not as full-featured as World Wind or even Google Earth. Several government organizations have abandoned Esri in favor of World Wind to reduce costs and gain flexibility.

Cesium is also a virtual globe API, but users complain that it is very hard to use, especially to extend, and that it lacks the finer details of World Wind that practical applications rely on. A few of the advantages listed in the section below are features we've implemented in World Wind Java, begun in Web World Wind, and will further implement in Web World Wind. Both Cesium and World Wind share functionalities, but World Wind goes beyond Cesium in the following ways:

- Measurement
- Shape editing
- Terrain intersection API
- Extensibility
- Ease of use, Clarity of API
- Custom shapes — Radar Volume, Antenna Gain, Analytic Surface, Geographic Mesh, Rigid Shapes, Surface Shapes Airspaces for representing air corridors and other volumes in space — World Wind has true surface shapes that conform to terrain — Continuous (rather than truncated) 2D map mode with selectable and extensible projection choices — Full KML and Collada support — Mil-Std 2525/APP-6 — Flexible and extensible viewing and navigation system — Shapefile support — WCS support — More flexible WMS support

Key differences between World Wind and Cesium

Cesium's focus is towards supporting computer graphics features and working with new 3D graphics data formats, whereas Web World Wind's focus is supporting practical features needed by its government sponsors and working with the common geospatial data formats that those sponsors use. In short, Cesium has a graphics focus whereas World Wind has a geospatial focus. Cesium is designed by computer graphics engineers. World Wind is designed by engineers and application developers deeply experienced in both computer graphics AND geospatial visualization.

1. Visualizing Data

Both are designed to display data in open web standards, but only World Wind is designed to display data in formats used primarily by DOD. World Wind provides support for Esri shapefiles, DTED elevations, and Mil-Std-2525/APP-6 symbology. Additionally, World Wind is straightforward to extend and is designed to be modified to support other proprietary formats as needed.

2. Developer's Interface

World Wind's interface for configuring shape positions and camera positions is geographic, so developers work with World Wind using the coordinates they are used to. Cesium's primary interface for configuring shape positions and camera positions is 3D-centric (xyz), rather than geographic. A geographic interface is available, but it appears to be an add-on in the form of helper methods to convert from geographic to 3D. This may appear to be a stylistic choice, but it has important effects on what application developers can do. For example, in World Wind developers can easily configure a shape to appear at geographic position with a height relative to the terrain, whereas this same configuration appears to require additional work in Cesium. For example, applications commonly need to display polyline that follows the terrain, but is elevated at some height above the terrain.

3. Terrain Data

World Wind is designed to combine elevation data from multiple sources at runtime on the client and can display elevation data from WCS and DTED data sources. Cesium supports its own proprietary elevation



data source and a proprietary Esri ArcGIS elevation data source. It may be possible to modify Cesium to support other open standards for elevation data, but runtime combination of multiple sources on the client would appear to make this impossible without changing Cesium's architecture.

4. Extensibility

World Wind is designed to be easily extensible and provides a single, simple interface on top of standard JavaScript and WebGL. Cesium appears to have two interfaces: one high level interface and another interface that attempts to capture the functionality of WebGL. Extending Cesium would therefore require that a developer learn both. Additionally, using WebGL in a new way or using new WebGL features may require that Cesium's graphics interface be modified to accommodate that feature.

5. Cesium is now going commercial, if you want the 'Pro' version, things World Wind simply provides.

<https://cesium.agi.com/products/cesium-pro/>

Best wishes

Patrick Hogan

[Invitation to join our Geo4All AgriGIS research thematic and help contribute to Global Food Security](#)



by **Suchith Anand**

University of Norrigham, UK.

Dear colleagues,

I would like to invite you to join the Geo4All AgriGIS thematic that is led by Dr Didier Leibovici (University of Nottingham, UK) and Dr. Nobusuke Iwasaki (National Institute for Agro-Environmental Sciences (NIAES), Japan).

Mobile broadband networks, location-based technologies, sensor-web technologies, and cloud computing offer the potential to develop location

independent sustainable living and to provide flexible and low cost information and services networks, linking individuals and communities on a scale that transcends national boundaries. Rapid developments in positioning, broad-band mobile communications, sensor platforms, sensor-web enablement, spatial search, and pervasive computing fundamentally change the access to and use of location-based data for agriculture. However, the necessary multi-disciplinary approach needed to transform raw data and information into useful intelligence and knowledge for scientists is still constrained by disciplinary and organisational silos and legacy concepts. Geospatial interoperability and open source standards-based GIS and open data will help deliver holistic solutions in geospatial technologies in AgriGIS by enabling the ready integration of separate location relevant technologies and lowering costs. The expanding range of open source GIS tools and open data will greatly enhance the use of geospatial technologies in agriculture and facilitates the sharing of information across various stakeholders and collaborative work.

To give you some background information, myself and Didier Leibovici in 2012 established the AgriGIS theme [<https://www.nottingham.ac.uk/ngi/research/geospatial-science/geospatial-science.aspx>] at the University of Nottingham through a BBSRC funded GRASP research [<https://www.nottingham.ac.uk/ngi/research/geospatial-science/projects/grasp-gfs.aspx>] that we were successful in collaborating with Plant Science colleagues. The aim of establishing the AgriGIS research theme at Nottingham was to expand cross-disciplinary research into the application of geospatial science to agriculture in genetic diversity, including identifying new sources of trait variation, planning breeding objectives with local knowledge input, and evaluating the effect of climate change scenarios. We also build wider research collaborations with Crops for the Future, Malaysia [<http://www.cffresearch.org/>] and the Open Source Geospatial Lab, UNMC, Malaysia (Tuong Thuy Vu)

<http://www.nottingham.edu.my/Geography/Research/GeospatialScience/OSGEO-lab.aspx>] through various ongoing research (including fully funded PhD



studentships) and AgriGIS workshops [<http://www.nottingham.ac.uk/ngi/documents/news-pdfs/agrigis2012proceedings.pdf>].

You can get some overview of GRASP from an AgriGIS workshop that we held at Nottingham <https://rd-alliance.org/sites/default/files/AgriGIS2014.pdf>

I am also contributing to RDA's Agriculture Data IG, and I presented our work at the RDA Agriculture IG session in Dublin in 2014 looking into Geospatial interoperability in Agriculture research. I also know the chair of the Agriculture IG, Devika Madalli (Indian Statistical Institute, Bangalore) and other colleagues in the IG.

<https://rd-alliance.org/group/agriculture-data-interest-group-igad/post/geospatial-interoperability-agriculture-research>

https://rd-alliance.org/sites/default/files/GRASP_GFS_for_RDA_Dublin2014.pdf

Aiming to expand our AgriGIS research globally, we have been building global research collaborations through our involvement in global research initiatives like the Research Data Alliance (RDA), for example leading the Geospatial IG [<http://www.nottingham.edu.my/Geography/Research/GeospatialScience/OSGEO-lab.aspx>]. Research Data Alliance builds the social and technical bridges that enable open sharing of data. The RDA vision is researchers and innovators openly sharing data across technologies, disciplines, and countries to address the grand challenges of society. The Research Data Alliance is supported by the European Commission, the National Science Foundation and other US agencies, and the Australian Government. Details at <https://rd-alliance.org/>

I am also in discussions for expanding collaborations with Global Open Data for Agriculture and Nutrition (GODAN) initiative [<http://www.godan.info>]. The Global Open Data for Agriculture and Nutrition (GODAN) initiative seeks to support global efforts to make agricultural and nutritionally relevant data available, accessible, and usable for unrestricted use worldwide. The initiative focuses on building high-level policy and public and private institutional support for

open data. The initiative encourages collaboration and cooperation among existing agriculture and open data activities, without duplication, and brings together all stakeholders to solve long-standing global problems. GODAN has high level governmental support (G7, United Nations, FAO) and strong collaborations in place with governments worldwide so it is important that we have synergies with GODAN and work together AND support the proactive sharing of open data to make information about agriculture and nutrition available, accessible, and usable to deal with the urgent challenge of ensuring world food security.

Capacity Building and Training in the latest geospatial technologies is key for staff and students in Agriculture to take advantage of the technological innovations in AgriGIS (removing the need for high cost proprietary GI software). It will also encourage more collaborations and startups which will help accelerate digital economy for the future. This will create innovation opportunities globally and locally. For example, the startup community is especially open to the use of open software and data, avoiding huge licensing costs and restrictions which may impact their business plans, raise early start-up costs, and restrict their ability to innovate. It also frees them of the need to use proprietary software and data, allowing them greater branding freedom and product flexibility.

BBSRC Funded GRASP is a good example of open philosophy (open source, open standards, open data, open access) in AgriGIS research, and now with over 100 dedicated Open Source Geospatial Labs already established in universities and research organisations around the world as part of the "Geo for All" initiative in just two years' time, we are now expanding research in AgriGIS through our global research labs for this, so please join us at

<https://lists.osgeo.org/mailman/listinfo/geoforall-agrigis> AND let us work together to support open principles in Agricultural research to deal with the urgent challenge of ensuring world food security.

Best wishes,
Suchith Anand



The first meeting of Ukrainian FOSS GIS users



by *Daria Svidzinska*
Taras Shevchenko National University of Kyiv, Ukraine

The meeting was jointly organized by the TSNUK OSGeo Research and Education Lab[1] and Institute of Geography of National Academy of Sciences. The event was successfully held in Kyiv, Ukraine, on January 30, 2016, and attracted over 100 attendees.

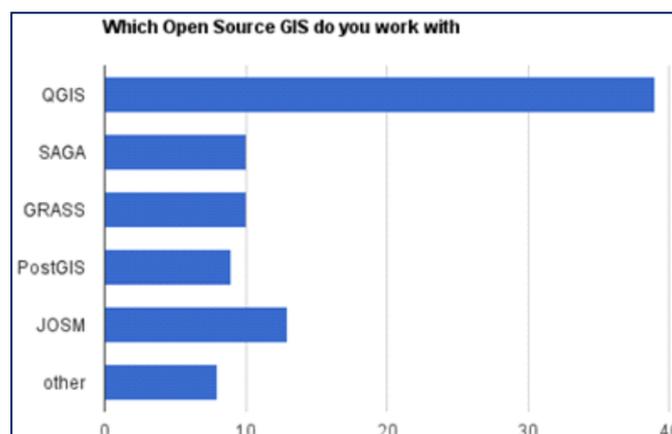
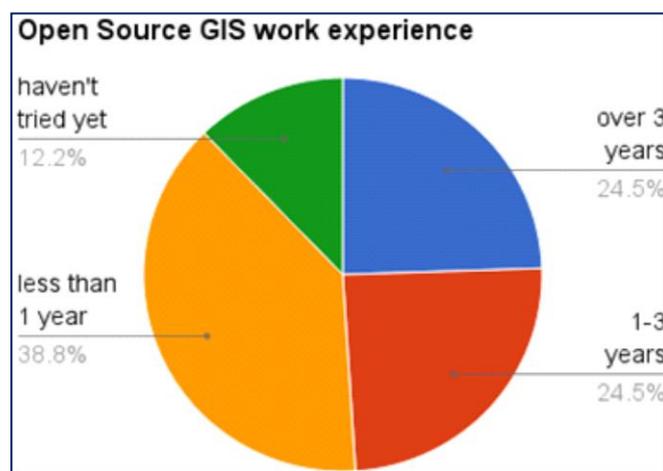
The meeting was opened by Vladimir Agafonkin, Leaflet creator and lead developer, who told about his library and highlighted the importance of simplicity as an approach to software development. The next keynote speaker was Andrey Holovin, one of the leaders of the Ukrainian OpenStreetMap community, who gave an extensive talk about the OSM, its principles, and open geodata benefits. Oleh Zamkoviy introduced his OSM-based service nadoloni.com to the community, and presented some data-validation tools that were specially developed for it. OSM humanitarian initiatives, namely HOT and Missing Maps project, were introduced by Viacheslav Loivsky from the Ukrainian Red Cross committee.



Vladimir Agafonkin about Leaflet Photo © Roman Sizo

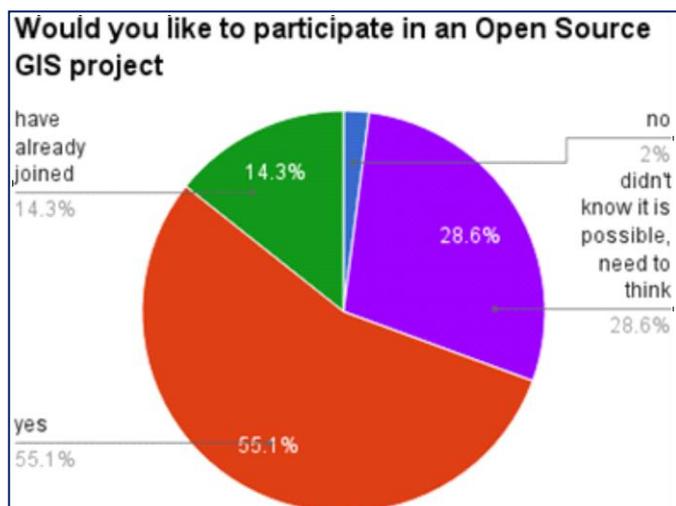
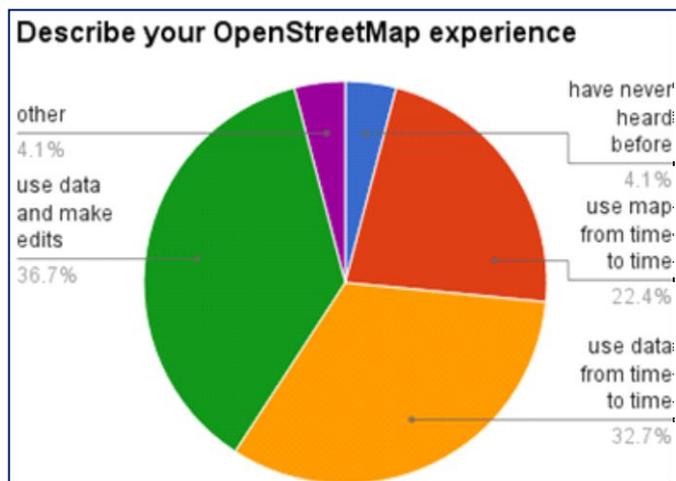
The following bunch of talks discussed benefits and pitfalls of applied open geodata and FOSS GIS use for education, large-scale topographic mapping, balneologic resources inventory, web-services development, remote sensing applications in hydrological and land cover mapping on regional scale, Proba-V data acquisition and analysis, and ecological and ecosystem mapping.

The meeting was preceded by a brief survey; 49 responses were received and helped to clarify the main features of the Ukrainian FOSS GIS and open geodata users' community. A large number of the users (40.8%) represents universities and research institutions, and 24.5% are from the business sector. The top-five thematic sectors include map production, scientific research, nature protection and ecology, geospatial data infrastructure, and tourism and recreation. The vast majority has less than 3 years of FOSS GIS usage experience, and usually mentions QGIS and JOSM as their favourite tools.





Also the Ukrainian users demonstrate active participation in the OSM (36.7% use the data and edit the map). Considering that over 60% of users already support open projects or are willing to participate, there is great room for improvement and community development.



[1] TSNUK OSGeo Research and Education Lab (<http://lab.osgeo.org.ua/>) was established on 11th of July 2014 at the Department of Physical Geography and Geoecology of the Taras Shevchenko National University of Kyiv, Ukraine. Main lab activities involve development of the open geodata (especially on protected areas), support and promotion of the open source geospatial software and geodata adoption for sustainable landscape and natural resource management, FOSS GIS-based teaching, training, and open educational content development

13. Scholarships for students and staff

- [Google Summer of Code 2016](#) is looking for student submissions of ideas and volunteers for mentors.
- The [2016 Geospatial Skills Competition](#) is accepting submissions from undergraduate students until April 29. This competition aims to showcase the skills of US students in the geospatial field. Three or four winners are expected and will each receive an all-expense paid trip to the Esri User Conference in San Diego, California, in July.

15. Awards

- **EuroSDR Award 2016 for the best PhD thesis related to Geoinformation science**

The research activities of the European Spatial Data Research (EuroSDR- <http://www.eurosd.net/>) network have developed over time through a collaboration of academia and national mapping agencies. In order to further strengthen the collaboration and to involve young scientists in its research, EuroSDR has established an Award to reward recent PhD theses that have significantly contributed to the development of Geoinformation science in the context of national mapping and cadastral agencies.

In order to be eligible, PhD theses should be defended in the period from 1st August 2015 to 31st July 2016. The PhD topic should be related to one or more of the research areas covered by the EuroSDR commissions. The award applications should consist of:

A cover letter containing the main contribution/impact of the thesis from the perspective of national mapping and cadastral agencies (up to 500 words)

- ✓ A PDF copy of the thesis
- ✓ A certificate showing the PhD defense date
- ✓ Any reviews of the thesis (if available) CV



The submitted application material will be evaluated by a six-member committee approved by the EuroSDR board of delegates. All material must be sent to the EuroSDR secretariat (eurocdr@soc.kuleuven.be) to arrive no later than 31st August, 2016. Notification of the selected thesis will be sent on 23rd September, 2016. The call is confined to applicants that completed their PhD study in Europe. The author of the awarded PhD thesis will receive an award of 500 EUR and will be invited to present his/her work at the 129th EuroSDR board of delegates meeting to be held in Madrid from 19th to 21 st October 2016.

<http://www.eurocdr.net/news/eurocdr-award-2016-best-phd-thesis-related-geoinformation-science>

Mrs Anneke Heylen, EuroSDR Secretariat p/a KU Leuven Public Governance Institute Parkstraat bus 3609, 3000 Leuven, BELGIUM, Tel. +32 16/32.31.80
www.eurocdr.net, admin@eurocdr.net

16. Websites

Kathi Cotney, associated with Triangle Area GIS of North Carolina, has written a guide on [how to prepare to take the GIS PLS exam and why to do it](#) in order to assist those in the decision of taking a State Board Professional Certification.

17. Ideas / Information

1. In celebration of the International Cartographic Association's International Map Year 2015/16, we invite original research contributions on the role of spatial data infrastructures (SDI), standards, open data, and open source software in mapping for a special issue of the International Journal of Cartography.



This special issue follows on SDI-Open 2015, a pre-conference workshop of the 27th International Cartographic Conference, titled Spatial data infrastructures, standards, open source and open data for geospatial (SDI-Open 2015), which was jointly organized by the Commission on Geoinformation Infrastructures and Standards, the Commission on Open Source Geospatial Technologies, and the Open Geospatial Consortium (OGC) on 20 and 21 August at the Brazilian Institute of Geography and Statistics (IBGE) in Rio de Janeiro, Brazil. While workshop presenters will be invited to submit expanded versions of the extended abstracts presented at SDI-Open 2015, the call is now open to all researchers. Please follow the journal's instructions for authors (<http://explore.tandfonline.com/cfp/est/tica-cfp-2015>).



Important dates:

Call for papers opens: 14 December 2015

Paper submission: 1 March 2016

Notification of acceptance: 1 June 2016

Publication of special issue: 1 December 2016

Guest editors:

Serena Coetzee serena.coetzee@up.ac.za (Chair: ICA Commission on SDI and Standards) Franz-Josef Behr franz-josef.behr@hft-stuttgart.de (Vice-Chair: ICA Commission on SDI and Standards)

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Michael Finn mfinn@usgs.gov (Vice-Chair: ICA Commission on Opensource Geospatial Technologies)

Commission websites

Commission on SDI and Standards:
<http://sdistandards.icaci.org>

Commission on Opensource Geospatial Technologies
<http://opensourcegeospatial.icaci.org>



2. Dr Rafael Moreno (University of Colorado, Denver, USA) has kindly volunteered to be the main coordinator for Geo4All webinars from now on. His lab at the University of Colorado, Denver in addition to excellent research, teaching and training, have also been running an excellent webinar series. Details at

<http://geospatial.ucdenver.edu/foss4g/home-2> and <http://geospatial.ucdenver.edu/foss4g/resources/webinars>

3. IREA-CNR, Milano, Italy, accepted the invitation and joined the AgriGIS group. One of the oldest Italian institutions in the field of satellite Remote Sensing, it is engaged in projects regarding applications in agriculture at different scales, from the global to the regional one.

In particular, IREA is coordinating the European FP7 Project ERMES (<http://www.ermes-fp7space.eu/>) that integrated satellite RS and mobile technologies in order to improve monitoring of rice cultivation and to support farmers' activities at a regional dimension.

Citizen science, VGI, and Sensor Web are also everyday keywords in the Institute. In particular, the Institute is proud to offer GET-It Starter Kut, an open and free software suite enabling domain users in building OGC Web services (like SOS, WMS, WFS), in uploading datasets, and in editing associated metadata (also for sensors used to collect data).

For more information, please write to Paola Carrara [carrara.p@irea.cnr.it]

4. This year is International Map Year [<http://mapyear.org/>], a worldwide celebration of maps and their unique role in our world. It's organized by the International Cartographic Association (ICA) and supported by the United Nations (UN).

To celebrate this year, ICA Commissions are preparing a series of activities to demonstrate the ability of Cartography in helping to solve global issues, according to the UN Sustainable Development Goals [<https://sustainabledevelopment.un.org/>].

The result of this will be a poster exposition and an Atlas published by ICA. Each goal (there are 17) will

have one poster. The Open Source Geotechnologies Commission got the Goal number 10 ("Reduce inequality within and among countries"). Under this goal, there are 7 targets detailed in page 21 of this document

[http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=EICA].

UN Sustainable Development Goal 10 – Reduce inequality within and among countries

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations

10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions

10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies

10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements

10.b Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island



developing States and landlocked developing countries, in accordance with their national plans and programmes

10.c By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 percent

This challenge is a call for all Geo4labs for inputs to construct this poster in an open and collaborative way. The idea is to expand the poster to a website, where projects, applications, and other solutions could be shared. This is a great opportunity to showcase the labs' outcomes in the UN environment in this very sensitive and important global issue. Any other ideas on this project are welcome!

How to participate:

Send an abstract from 500 to 1000 words and include as many pictures of classes, projects, field works, mapathons, and, of course, maps and map interfaces. Optional: Video with up to 5 minutes presenting your lab activities.

Send the results to

geo4all.cartographicchallenge@gmail.com until March 31st, 2016.

During the month of April, the poster's layout ideas will be open to vote and collaboration.

Outputs :

Poster and ICA Atlas

Website with results and edited video

Publication of the abstracts with ISBN

Best regards,

Silvana Camboim (chair) –silvanacamboim@gmail.com

Mike Finn (co-chair) -mfinn@usgs.gov

Open Source Geotechnologies Commission –
<http://opensourcegeospatial.icaci.org/>



5. GeoForAll School Network

Dear colleagues,

Geo4All is committed to work for open principles in geoeducation and protect open principles for our future generations. Empowerment of teachers is important to enable empowerment of students. Thanks to Dr. Nikos Lambrinos (Greece) and Elżbieta Wołoszyńska-Wiśniewska (Poland) who are our chairs for the Teacher Training & School Education thematic and have been providing us some excellent inputs and ideas for helping us empower school teachers globally. One of the main points raised was that currently our focus is on higher education/universities and all our labs are on the university level, and school education (primary and secondary) has very different requirements and needs, thus it is important to create a separate network theme for schools. This network's focus should be directly related to school education and involving partners from this sector. We are grateful to Ela and Nikos for their leadership and inputs for us.

Now that we have reached critical mass at the university level, we need to focus on expanding this to the school level. To do that we need to have a separate school network started, as Nikos rightly pointed out, since the requirements/needs are very different. In fact, I believe that if we start a school level focused network now (building upon the networks and infrastructure we have in place), it will become much much bigger than the university network and have wider impact.

We now also have access to different online platforms like GeoAcademy (good for our teacher training needs but not currently for school level students). Phil has kindly sent us this info that GeoAcademy can provide a starting point for a 5 course sequence in Introduction to Geospatial Technology using QGIS to be adopted and/or adapted by any college, school, etc. The free curriculum can be downloaded here: <http://spatialquerylab.com/projects/open-source-gis/>. The course can be enrolled in directly, for free, at anytime by anyone from anywhere here: <http://fossgeo.org/free-qgis-courses/>. Finally, an example of a Canadian Technical College adapting these can be found here



<http://www.gogeomatics.ca/magazine/open-source-gis-for-everyone-a-ggis-based-program-at-langara-college-vancouver.htm>

For wider spatial literacy at school level, we will need an online platform that is free and open as well as easy to use. Hence it is important to explore collaborations with other like minded organisations. So on February 11, Maria Brovelli, Nikos Lambrinos, and myself (a few more were planning to join but couldn't make it) had a telemeeting with Chris Tucker of MapStory Foundation to help us understand more about their software and platform. Chris kindly explained details of the platform and its user friendliness (you don't need to be a GIS expert to use it, which is a good advantage). We also discussed some good examples (such as mapping the neighbourhood) to help teach spatial literacy in schools globally. I think having MapStory examples of deforestation in different places might also be a good example to help teach students the effects of climate change as well as need for protecting the environment. Teaching Spatial literacy in schools is key for also helping build good global citizens.

For Geo4All, we welcome collaboration with everyone who follows our principles. Our main requirement for the online education platform is that all the software and tools used for our education will need to be free and open (not only now but for the future). The reason is that we have seen some examples in geo domain where tools that started as 'free' later changed conditions. For example, Google Earth, even though not open source, offered an open API, attracting a lot of users, which they also took away after a while. Now the open source 'version' of Cesium again looks like it is planning to charge users for their 'premium' version, so we need to be careful and understand full details of any educational platform and tools that we think of using. So I am kindly requesting for Chris and MapStory Foundation to provide confirmation that all the underlying software and tools (including the Virtual Globes) are all free and open source software so that we can be assured that the MapStory platform will be fully free and open for everyone in the long term.

I also request colleagues to go through the <http://mapstory.org/>. Any queries/more information

that you have/need, please ask Chris and he will be pleased to answer. I really hope we all can work together and scale up ideas for expanding our school education programs globally.

Best wishes,
Suchith Anand



6. II gvSIG Chair Contest. Works with free GIS:

(English) <http://blog.gvsig.org/2016/02/04/ii-gvsig-chair-contest/>

(Español) <http://blog.gvsig.org/2016/02/02/ii-concurso-catedra-gvsig/>

