Volume 2, No. 7 July 2016

GeoForAll

Monthly Newsletter

Be part of "Geo for All"

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Editorial

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

Dear Members of the Network,

Dear readers of the Newsletter,

I am in the joyful position to inform you, or remind you, that the issue you are reading is the twelfth issue of GeoForAll. Yes, we can celebrate our first year anniversary of Newsletter publishing.

Thousands of people, either members of the Network or not, have read the Newsletter in the past year, at least one issue. Each of us could have something to say about this effort. There were mainly good comments about the appearance of the Newsletter and its content. The content reflects the work done by the team of the Newsletter, all the co-editors who send their contribution every month. They are the eyes and ears of the Newsletter around the globe, giving and sharing their spare time with us in order to inform the community of what is happening in their region. I would like to thank all of them for their great job and wish they stay with us for another year. But we cannot ignore some comments against some information we published. We did not mean to insult anyone with this information and for this reason we apologise. These comments made us more careful and forced us to establish some rules.

After all, we should not forget that no one of us is professional. We try to avoid this kind of mistake as much as we can. And, in my opinion, we have achieved this after a whole year of publishing.

Dear All,

In the contents of the Newsletter you can find, among other articles, a very interesting part which covers the “Lab of the Month.” It is a tribute to Labs, members of our Network, which are doing very interesting research about the matters we are concerned and in other cases, Labs that are dedicated into educating people on the software and techniques we use.

In this issue you can find a new content, as interesting as the “Lab of the Month.” It is called “GeoAmbassador” and is dedicated to people, not Labs, who played or are still playing a key role in the formation of the Network. Each month we will publish about a different person, a small part of their biography, and their role in the formation and expansion of the Network. Do not forget that all these people you will read about have given a lot of their spare time in this and their benefit is that their dream came true. This is the best reward a teacher is looking for.

Now I will let you read our 12th issue, hoping that you will find it as interesting as the previous.

Happy Anniversary

Nikos Lambrinos

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

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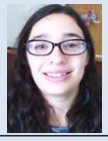
Co-editor 	Emma Strong, GIS Coordinator with Southern Mississippi Planning and Development District eestrong118@gmail.com	North and Central America
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GeoForAll Regional Chairs and Contact Information

North America Region

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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

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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

Ottawa, Ontario, OSGeo Meetup Group meets on the third Thursday of each month. If you are located in the area, go to the link to sign up to the group and get updates about future events. (http://www.meetup.com/OttawaOSGeo/)

2. A) Lab of the Month

SIGTE, University of Girona, Spain

By Suchith Anand

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

Dear Geo4All Colleagues,

It is my great pleasure to introduce our colleagues at SIGTE University of Girona [1], Spain, as our "Geo4All" lab of the month. One of the founder labs of the Geo for All initiative, SIGTE has been contributing immensely to our teaching, research, and service activities.

University of Girona is a public institution devoted to excellence in teaching, research and participation in the progress and development of society through the creation, transmission, diffusion, and criticism of knowledge related to the sciences, technology, the humanities, the social sciences, and the arts. It is deeply rooted in Catalonia and Catalan culture and is one of the primary economic and cultural motors of the region. At the same time, it pursues a vocation of universality and openness to all traditions and cultures. The University, located in the city of Girona, is a part of the Catalan public university system. Historically, the Universitat de Girona is heir to the so-called Estudi General, which was created in 1446 by Alphonse the Magnanimous, who granted Girona the privilege of awarding degrees in grammar, rhetoric, philosophy and theology, law, and medicine. Recently, in 1991, a decree of the Catalan Government created the new Universitat de Girona, a multidisciplinary reference point, thanks to contributions from a rich variety of university cultures.

The Geographical Information Systems and Remote Sensing Service (SIGTE) of the University of Girona is a research support service specializing in geospatial data treatment and the use and application of geographic information technologies. They offer technical support, advice, training, and technological solutions in the field of geographic information. SIGTE colleagues have been the pioneers of a very successful summer school program dedicated to free and open geographic information software and aimed at promoting the use and development of free geospatial solutions and empowering students.

The Summer School, which was traditionally been held in Girona during one week in July (running for 5 editions from 2010 to 2014), has brought together 30 persons from around the world (see figures 1, 2, 3). The program focused on open web services and web map applications, especially in regard to publishing data on the web. It dealt with issues such as spatial data base management and consultation, the creation of web-based geospatial services, and the development of web viewers for data publication. The Summer School offered participants practical experience in the use of free geospatial software to create and implement open web services and web map applications.

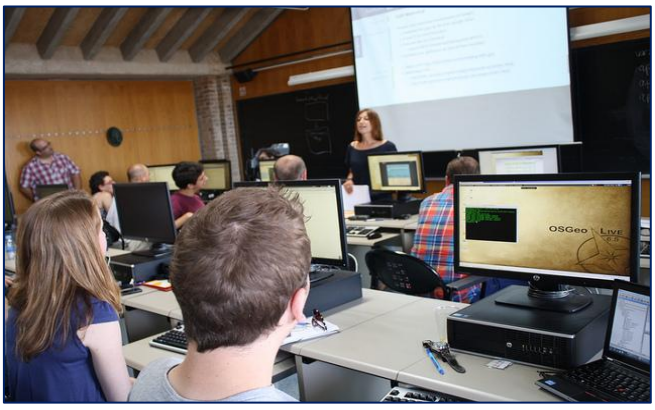

Figure 1 - Girona GIS Open Source Summer School in progress

Figure 2 –Group Photo of Summer School Participants

I still remember the email discussions that I had with Lluis, Gemma, and other colleagues (sometime in early 2009!) when we put together a joint ERASMUS bid for helping us start this Summer School initiative, and I am very grateful that I had the opportunity to collaborate with amazing colleagues at SIGTE to lay the seeds of this pioneering Summer School initiative. This summer school initiative has been an inspiration for a lot of similar Open Source GIS summer schools around the world from China to India. GIS Open Source Summer School initiative aims to ensure the highest quality of results and internationalize the curricula, in order to prepare students in an international working environment and competitive skills with emphasis on collaboration during the course. All course materials from the summer school are available online [2].

In 2016, SIGTE is still working and applying free and open source technologies in the geospatial domain in a wide variety of technical projects such as a Participatory GIS, the Mosquito Alert! project (a citizen platform for studying and control mosquitoes which transmit global diseases), or SIG Dunes (a web mapping application for the inventory and monitoring the dunes located on the shore front of the Catalan coast), among others.

On the training side, SIGTE is providing basic and specialized training courses (on site and on line courses) based on the use of Open Source Technologies in Geospatial applied to different scopes (regional and local planning managers, public administration in general, researchers in primatology, oceanography, etc.), and UNIGIS Girona [3] has become a Msc in GIS where FOSS has a noticeable adoption and presence, and it is a sign of identity.

Moreover, SIGTE is the organizer of the Spanish FOSS4G (Jornadas de SIG Libre) [4], ten editions to now, and in 2016 has also organized the 2nd International QGIS User and Developer Conference as well as a QGIS Hackfest [5] with the kind support of the OSGeo Foundation.

Figure 3 – Plenaries at 10th Jornadas de SIG Libre

We thank Gemma Boix, Lluís Vicens, Gemma Pons, Rosa Olivella, Ferran Orduña,Toni Hernandez, Alexandre Busquets, Josep Sitjar, Laura Olivas, and all colleagues and students at SIGTE lab for their contributions to the Geo4All initiative and look forward to working and building more collaborations with all interested on this education mission.

Best wishes,

Suchith Anand

[1] http://www.sigte.udg.edu/en/

[2] http://www.sigte.udg.edu/en/gis-summer-school/

[3] http://www.unigis.es

[4] http://www.sigte.udg.edu/jornadassiglibre/en/

[5] http://blog.qgis.org/2016/06/30/report-back-15th-qgis-hackfest-in-girona-spain/

B) GeoAmbassador of the Month

Professor Georg Gartner

Dear colleagues,

It is my great pleasure to introduce Professor Georg Gartner as our inaugural GeoAmbassador. It is indeed an honour for us to have an eminent colleague and a visionary who helped us to create “Geo for All” as our first GeoAmbassodor.

Georg Gartner is a Full Professor for Cartography at the Vienna University of Technology. He holds graduate qualifications in Geography and Cartography from the University of Vienna and received his Ph.D. and his Habilitation from the Vienna University of Technology. He was awarded a Fulbright grant to the USA and several research visiting fellowships. He was Dean for Academic Affairs for Geodesy and Geoinformation at Vienna University of Technology. He is Editor of the Book Series “Lecture Notes on Geoinformation and Cartography” by Springer, and Editor of the "Journal on LBS" by Taylor & Francis. He serves currently as Past President of the International Cartographic Association.

Figure 1 – Prof. Georg Gartner (Georg is a true cartographer in every sense. He even has map background in his profile photo!)

Georg is a true global citizen who has travelled around the world working for expanding opportunities for geospatial education for all. Georg has been a mentor and great colleague for me at the International Cartographic Association (ICA). Sometimes random meetings help shape future events, and my first meeting with Georg was by sheer coincidence as I sat next to him for lunch during AutoCarto conference around 8 years back in Shepherdstown, West Virginia, USA. At that time, Georg was the Chair of the ICA Commission on Maps and the Internet. I introduced myself, and within few minutes we were discussing ideas for expanding research collaborations and organising Location Based Services conference in Nottingham! Georg is the founder of the LBS conference series which was key to help establish LBS research and journals. His vision for establishing LBS research has always inspired me. His humility and helpfulness are great qualities that I greatly admire.

It was thanks to the support and vision of Georg Gartner and Arnulf Christl (OSGeo President at that time) that were key in helping bring together like-minded communities on the bigger vision of joining efforts for enabling geospatial education and opportunities for all for helping create a better world. The International Cartographic Association and the Open Source Geospatial Foundation signed an MoU in 2011 (Fig. 2) on the goal of developing global collaboration opportunities for academia, industry, and government organizations in open source geospatial software and data . This MoU was updated and renewed in July 2015. In 2015, ISPRS joined GeoforAll (Fig. 3).

Figure 2- Prof. Georg Gartner and Arnulf Christl shake hands after signing the MoU at Intergeo 2011 in Germany

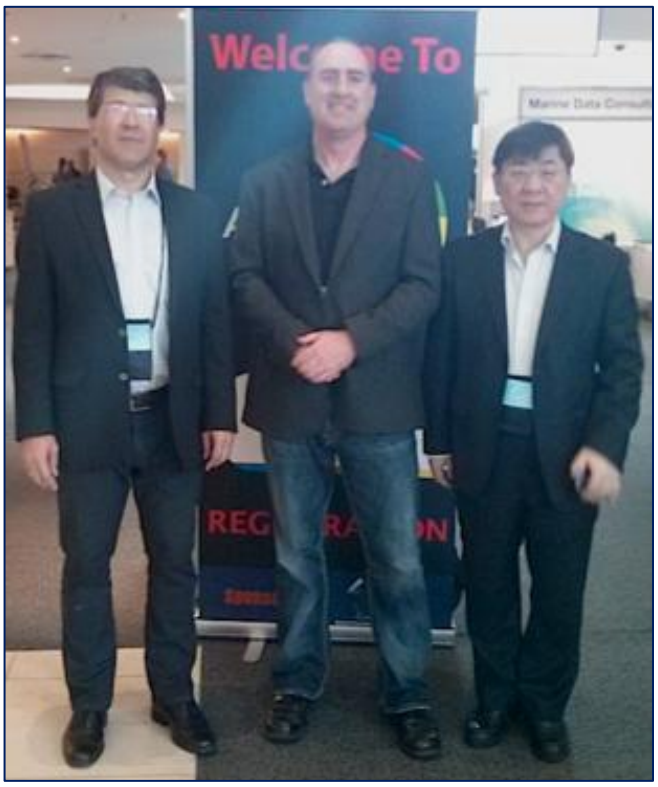

Figure 3 – Three presidents at AfricaGEO 2015 in Cape Town. Prof. Georg Gartner (ICA), Jeff McKenna (Osgeo), and Prof. Chen Jun (ISPRS)

We are proud to honour Georg as our inaugural GeoAmbassodor, and we are extremely grateful for his contributions to Geo for All. We wish Georg and his wonderful family all the very best for the future. We are truly grateful for Georg for his strong support and guidance over the years. Georg also serves on the advisory board of Geo for All, and we look forward to his guidance for the future.

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 at **http://indico.ictp.it/event/7658/**

4. Conferences

Asia

July 2016

1. 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

November 2016

2. 28-30: 2nd Int'l Conference on Remote Sensing Technologies and Applications (ICRSTA 2016) Sanya, China. More details at http://www.engii.org/ws2016/Home.aspx?ID=819

March 2017

3. 20-21: Global Forum for Innovations in Agriculture (GFIA)

Deadline August 31st. Abu Dhabi National Exhibition Centre, UAE. More details here

Africa

October 2016

4. 24-28: 11th International Conference of the African Association of Remote Sensing of the Environment

Hotel Africana Plot 2-4 Wampewo Avenue, P.O. Box 10218, Kampala, Uganda

For more information: View Summary (http://goo.gl/VYR8cd)

Europe

July 2016

5. 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 Mitasova, 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

6. 24-26 August: FOSS4G Conference, Bonn, Germany. Registration started.

September 2016

7. 12-14 September: Earth Observation Open Science 2016 Conference Frascati, Italy.

Deadline for Abstracts: May 15.

8. 26-30: NSPIRE Conference 2016: http://inspire.ec.europa.eu/events/conferences/inspire_2016/

The INSPIRE Conference 2016 aims to show how the implementation of INSPIRE contributes to the European Interoperability Framework and the EU's digital economy in general.

The INSPIRE Conference 2016 will take place in Barcelona, 26-30 September 2016

VII Jornadas Ibéricas de Infraestructuras de Datos Espaciales: http://www.jiide.org/jiide2016/inicio

Del 27 al 30 de septiembre tendrá lugar en Barcelona las "VII Jornadas Ibéricas de Ibéricas de Infraestructuras de Datos Espaciales". En esta ocasión, además coinciden con la conferencia Inspire.

9. 29-30: EUROGEO 2016 "Geographic information for a better world", Malaga, Spain.

One proposed session is "Open Source GIS applications in Geospatial Analysis, Policy and Planning" and there are others on Green Infrastructures, Future Urban Planning and Education.

October 2016

10. 12-16 October: Open Source Geospatial Research and Education Symposiun 2016

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

North and Central America and the Caribbean

July 2016

11. 26-28 July: Third International Conference on CyberGIS and Geospatial Data Science

Urbana, Illinois, USA

September 2016

12. 5-8 September: URISA Caribbean GIS Conference

Barbados

13. 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".

14. 11-16 September: Research Data Alliance Plenary 8

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

15. 14-16 September: AutoCarto 2016

Albuquerque, New Mexico, USA.

Call for lightning talks for an ICA Commission workshop of open source geospatial technologies, "Advancing GIScience with Open Source Technologies."

Please provide a proposed talk title (and, if you would like, an expanding sentence or two) and your contact information to: Michael P. Finn, U. S. Geological Survey, Vice-Chair, ICA Commission on Open Source Geospatial Technologies, at mfinn@usgs.gov

Important Dates:

- Proposed Talk Title Submission: 20 June 2016
- Acceptance Decision Notification to Submitters: 15

July 2016

- Early Registration Deadline: 01 August 2016
- Registration: http://tinyurl.com/zl8dadg
  Note: Attendees must be registered for AutoCarto 2016. There is no separate or additional fee for the workshop

Lightning Talks: 14 September 2016

October 2016

16. 2-5 October: 69th Canadian Geotechnical Conference

Vancouver, British Columbia, Canada.

July 2017

17. 2-7: 28th International Cartographic Conference (ICC) of the International Cartographic Association. Submissions are due October 26, 2016

5. Webinars

Thanks to Rafael Moreno, Department of Geography and Environmental Sciences, University of Colorado Denver, the Network is informed about the new webinar collaborations with the
University Consortium for GIS (UCGIS), and the The American Society for Photogrammetry and Remote Sensing (**ASPRS**).
1. The Department of Geography and Environmental Sciences will coordinate with ASPRS for 2-3 webinars of their yearly webinar offerings.
2. For these 2-3 webinars they will post the Geo4All webinar offering in the ASPRS webinars calendar and promote them with their members and mailing lists.
3. For these 2-3 webinars the Department of Geography and Environmental Sciences will use the ASPRS webinars system. They will record webinar, create MP4 video recording and give it to GeoForAll Network for posting in the Geo4All Webinars YouTube Channel. They will also post the recording in the ASPRS YouTube channel. Their webinar broadcast system supports up to 500 participants and usually they have over 100 people attending.
4. The ASPRS webinars usually take place final Friday of every month around noon. The Department of Geography and Environmental Sciences will select dates for the join webinar preferably out of the summer months when many members and audience of the Geo4All community are out.

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.
- "Data Wrangling with MongoDB" Includes a lesson with OpenStreetMap, and explores using data from multiple sources and using it for data-driven applications. https://www.udacity.com/course/data-wrangling-with-mongodb--ud032

7. Training programs

- GeoForAll educational inventory system, a place to search and share educational materials: http://www.osgeo.org/educational_content

- Registration for online gvSIG: Training courses are 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.
  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 matricula 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". Aquí

- 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.

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

1. The book **Open Innovation, Open Science, Open to the World - a vision for Europe** brings together some of the key conceptual insights behind the "Three Os" and highlights actions that are already taking place.

You can download the book from the EU Bookshop at http://bookshop.europa.eu/en/open-innovation-open-science-open-to-the-world-pbKI0416263/

11. Free Books, educational materials, etc.

Kurt Menke announced the pre-release of a new GeoAcademy workbook named “Discover QGIS,” available here: https://locatepress.com/dqw

For the first time, the entire GeoAcademy curriculum has been converted to fit into a convenient workbook format with Locate Press. Originally written for QGIS v2.4, the GeoAcademy material in this workbook has been updated for use with QGIS v2.14, Inkscape 0.91, and GRASS GIS 7.0.3. The material is also backwards compatible to QGIS v2.8, despite minor GUI changes. It therefore represents the most up-to-date version of the GeoAcademy curriculum!

This workbook covers GIS fundamentals, spatial analysis, data management, cartography, and remote sensing. There are solution files for each exercise, and most exercises have a challenge exercise. Discussion questions are also included at the end of each exercise. Some of the many highlights include learning how to: work with coordinate reference systems, create data via georeferencing and geocoding, using GRASS to conduct a supervised classification of satellite imagery, and work with both QGIS and Inkscape to create a publication quality map. Thought was given to improving the content and organization for both hardcopy and electronic readers. The GeoAcademy data was reorganized to match a chapter structure.

Changes were made to several exercises, reflecting the newly updated integration of GRASS GIS with QGIS that came with QGIS v2.10. Portions that include working with GRASS vector maps include both GRASS 6 and GRASS 7 versions of the exercise databases. The portions using the free software Multi-Spec were rewritten using QGIS. Efforts were also made to incorporate some of the exciting new QGIS features such as Live Layer Effects into the Challenge Assignments. It also includes a forward by Dr. Phil Davis.

The book can be purchased now as a digital preview version for $24.95 https://locatepress.com/ebooks. It is a preview release as we work out a few minor formatting issues and go through final review. In short order it will be available as the official release both in digital and hard copy formats. Purchasing the preview entitles you to all updates and the final version when released. Your feedback is welcome and encouraged.

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

CEOS: Committee on Earth Observation Satellites

CLGE: The Council of European Geodetic Surveyors

COGO: Coordinate geometry

CRS: Coordinate Reference System

CSA: Canadian Space Agency

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

EuroSDR: European Spatial Data Research

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

JAXA: Japan Aerospace Exploration Agency

KML: Keyhole Markup Language

LiDARL: 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

ROSHYDROMET: Russian Federal Service for Hydrometeorologyand Enviromental Monitoring

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

WGCapD: Working Group on Capacity Building and Data Democracy

WGS: World Geodetic System

WMO: World Meteorological Organization

WMS: Web Map Service

WMTS: Web Map Tles Servises

WPS: Web Processing Service

Open Data, why does it matter?

by **MSc., eng. Paweł Kwiatkowski**
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Nowadays it is hard to imagine the world without open data, and they are often used without awareness of their nature. There are many areas where open data are used, and the benefits of using them continue to grow. Therefore, one of the priorities of the European Union is to promote free access to the data.

ENERGIC-OD, European NEtwork for Redistributing Geospatial Information to user Communities - Open Data (http://www.energic-od.eu/**)** is a European project aiming at developing geospatial open data **applications** based on the access facilities provided by the **Virtual Hubs** architecture. The project is addressing the issue of heterogeneous data use in harmonised technological environments responding to various user communities requirements.

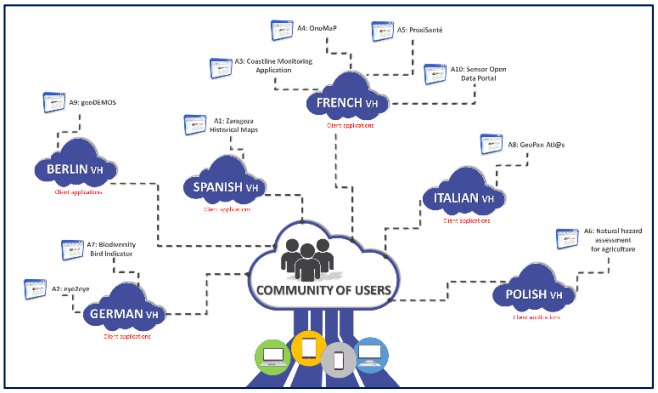
It strives for facilitating access to data gathered and linked by a virtual hub, enabling new organizations (public or private), business, or individuals to use them for their own needs and applications.

The project responds to the recognised contemporary data initiatives, coming both from the public sector (like INSPIRE or Copernicus) and social activity sources, providing a variety of open data solutions. The ENERGIC-OD will show how diverse spatial data could be put together in a virtual hub and utilised by an application for the benefit of a particular user community.

6 VIRTUAL HUBS

ENERGIC-OD implements a set of **5 Virtual Hubs (VHs) at national level** in France, Germany, Italy, Poland, and Spain, and an additional **Virtual Hub at the local level** in Berlin.

ENERGIC-OD's Virtual Hub approach adopts mediation and brokering solutions: specific components (brokers) are dedicated to harmonize service interfaces, metadata and data models, enabling seamless discovery and access to heterogeneous infrastructures and datasets.



10 INNOVATIVE APPLICATIONS

ENERGIC-OD Consortium is developing an initial set of **10 different multidisciplinary applications** on top of the deployed VHs. The main expected impact of VHs is the creation of new business opportunities opening up an access to the Research Data and Public Sector Information.

Zaragoza Historical Maps is a web application in development by the **UNIZAR** for the Zaragoza Council. It aims at providing a visualisation tool to portray historical cartography from Zaragoza City from 1879 to 1986 that currently are available at the Zaragoza Open Data Platform in the form of raster files.

eye2eye is a mobile app supporting communication between citizens and administration in the context of land consolidation. eye2eye will bring added value to the already existing desktop solution, also developed by the **AED-SICAD AG**. The goal is to shorten long processing times and to optimize citizen participation in the land consolidation projects.

The ***Coastline Monitoring Application*** is the mobile application led by the partner **BRGM** and brings added value to coastline evolution monitoring for expert users on site while allowing citizens to take part in coastal observation: an innovative mix between open data expectations and crowd-sourcing. *Coastline Mobile Application* makes recorded coastline open data accessible to all and allows users to enrich scientific knowledge.

The ***OnoMaP*** application is led by the partner **CNRS-Lab-STICC** and generates noise maps via simulations and citizen-contributed noise data recovered from a smartphone application coupled with open traffic and open street map data. The app aims to put the citizen at the centre of a data acquisition project, and highlights the community's initiatives to involve the public.

Depth France wants to build a web application named ***ProxiSanté*** that will offer new innovative services in the health field. The application will propose to the user a form to select care service (doctor, pharmacy, etc.) to analyse and a map to display the accessibility areas in less than a given time. These areas are also called isochrones.

The **Institute of Geodesy and Cartography** (IGiK) developed a unique modeling research approach to the drought, frost, and humidity phenomena spatial distribution as well as resulting in the yield forecasting. The new application called ***Natural hazard assessment for agriculture*** will take as main input the tables and maps generated by the IGiK's system every 10 days from satellite information as a result of the modeling mentioned above.

The aim of the **LUP-Umwelt** application under the name ***Biodiversity Bird Indicator*** is to develop a standardized automated process that enables an extensive and inexpensive analysis of the status of favorable/unfavorable habitat structure in agricultural areas using remote sensing data. This app also provides support for conservation measures and improvement of habitat structure.

GeoPan Atl@s application developed by **POLIMI** will provide real-time data publishing of already existing multi-temporal Open Data SDI's at the regional, national, and local level in a unique user-friendly interface. Such datasets include the catalogue at regional level of available local Open Data (for example cadastral map series, satellite data, current Geo databases at the municipality scale, Orthoimages, historical maps, and others).

GEOdemos is a mobile application developed by the **SRP** that uses heterogeneous data and services on the

basis of international networked infrastructures and gives the cosmopolitan a strong tool to use these data and services. The aim is to make it possible for the user to assess the living and housing quality of different places in Europe with the help of well-chosen aspects.

Sensor Open Data Portal (Sensor ODP) is an application that aims at providing sensor measures (e.g. water temperature, wind strength, or power consumption) as Open Data sources. *Sensor ODP* will be applied in various different contexts with different kinds of sensor networks. *Sensor ODP* is developed by the French partner **Alkante**.

PROJECT FORUM

The ENERGIC OD project also provides an online Forum. Through the Forum users can tell us about their needs: what kind of solutions are currently not available, or not possible to implement because of technical limitations and fragmentation of data. There is also a place for sharing any ideas to new users of geospatial information.

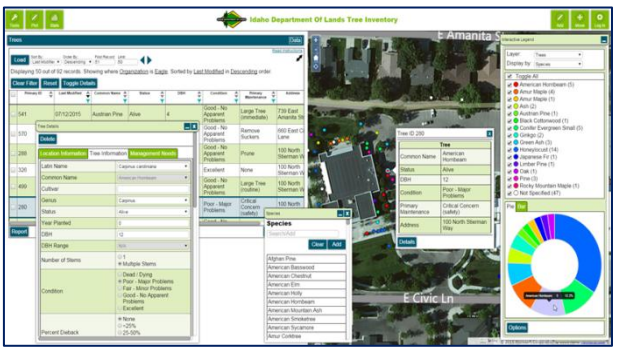
All interested are invited to sign up and actively participate in the Forum. The website Forum address is http://forum.energic-od.eu/.

Colorado GIS Firm Thrives with FOSS4G

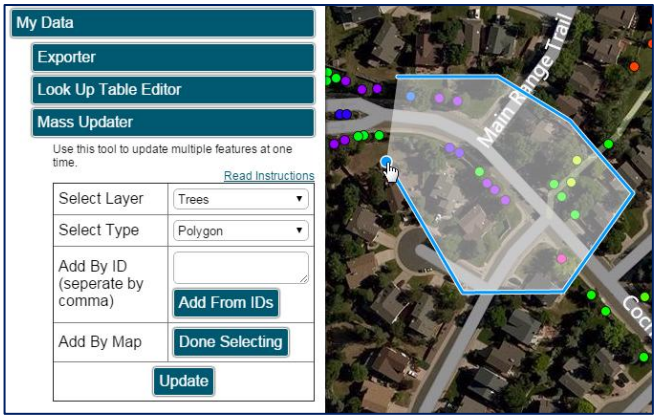
By: Clayton Steneroden, Directory of Software Development, Plan-It Geo, Denver, Colorado, USA
www.planitgeo.com

Plan-It Geo is a small company in Colorado that does a lot of interesting work related to trees. Our tree canopy assessments and inventories show cities of all sizes where trees are planted and of what variety, where more trees can and cannot be planted, and where they should be planted to provide the most benefit. Several modern GIS technologies, both closed- and open-source, are employed to assess tree canopy, such as software to process aerial imagery, satellite imagery, and LIDAR data. Tree inventories are another of our primary services. We send arborists to physically walk an area such as a park, or even an entire city over many weeks or months, to identify trees, measure and assess them, and add them to an online map using our software. When complete, the client has a comprehensive inventory of what kind, condition, and size of trees are in their boundaries, and often therefore in their care. Collected data is used to identify trends, track the effects of a pest or disease, calculate ecological and economic benefits, plan, and budget. In addition to cities, Plan-It Geo customers include private tree care firms, state and federal agencies, home-owner associations, and non-profits.

Our main software products are Tree Plotter and Canopy Planner, both a part of our Urban Forest Cloud platform. Tree Plotter is a web-based application: users plot trees on a map using a tablet or phone without the need to install an app. Canopy Planner, also web-based, shows tree canopy coverage over a city or region and allows users to explore scenarios for adding or changing tree coverage by manipulating various inputs and seeing outcomes. Customers liked our software because it was easy to use and performs well, and provides great value as an interactive tool in addition to a tree inventory report or canopy assessment report. For many reasons, including the success of the software, the time arrived to develop a new release in 2014, and we began the task of evaluating various technologies.

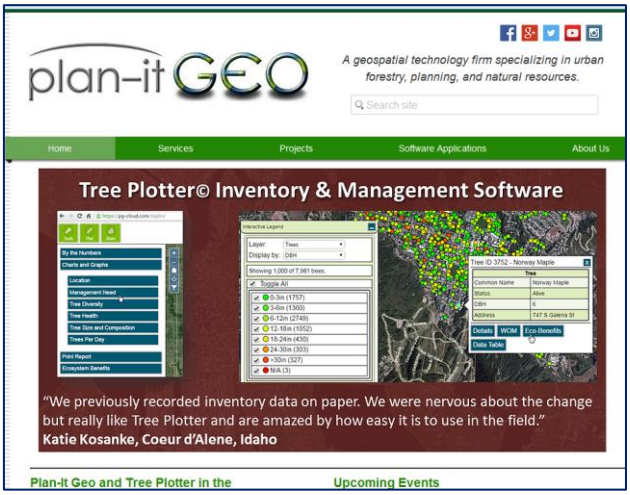


Version one of our apps was built using closed-source technologies. We turned to open-source software for version two for various reasons, including cost and flexibility, settling on a PostgreSQL/PostGIS-based stack, using OpenLayers on the client side – and we haven't looked back.



PostgreSQL is a great database and will be a natural transition for those grounded in MySQL, or any other major relational database. Enhanced with the PostGIS extension, it becomes a powerful foundation for a spatial software platform. The PostGIS community is thriving and has good documentation (for open-source, of course!) and a welcoming atmosphere for developers of different backgrounds. One of the first things we noticed when switching to a PostgreSQL-backed system was the speed of the platform over version 1 – our clients noticed this as well. OpenLayers is a JavaScript library, a very powerful web-mapping API for the browser; it lacks documentation in places but is surprisingly reliable and well-performing. And where there is a good OpenSource project, you will find enthusiastic people who write books. I used, among other helpful resources, The Book of OpenLayers3 (https://leanpub.com/thebookofopenlayers3) by Antonio Santiago. Discovery of the GDAL library was essential for more advanced spatial operations like manipulating data; definitely more technical, the library contains powerful tools that are remarkably terse. Python-based GDAL tools in particular I found surprisingly easy to work with. We use GeoServer for custom map imagery and feature delivery: relatively easy to get started with, anyone can setup spatial web services quickly, and have the power to tailor it to their needs. To see an example in action, visit the Forest Carbon Xplorer, (http://forestcarbonx.umn.edu/) an application we built for the US Forest Service and the University of Minnesota.

When I began with Plan-It Geo two years ago, I knew next to nothing about GIS, or FOSS4G. I now use open-source GIS software nearly every day, working for a company that is thriving on a fully open-source GIS platform. I find FOSS4G a fascinating realm of amazing technologies with incredible potential to shape our world: fast moving, engaging and exciting, populated with interesting, knowledgeable, and passionate people. It is my hope that our story will inspire others to 'take the plunge' with respect to FOSS4G. Please visit our website (http://www.planitgeo.com/) to try out Tree Plotter yourself, watch recorded webinars (one webinar was done for Geo4All and can be viewed on YouTube here https://youtu.be/y1UUG7yHVN0), and sign up to attend one of our upcoming webinars to learn more about using our software for working with trees and other natural resources.



17. Ideas / Information

1. There is a new YouTube channel where we will be posting the Geo4All webinar recordings and other related videos. Subscribe to it (click on red button on right hand side).

Check it out:

YouTube Channel

https://www.youtube.com/channel/UCL1E2akvCNWP_nC0p5CpB8g

2. Call for Papers for a JSTARS Special Issue on "Advances in Agro-geoinformatics Research and Applications"

Full paper submission deadline: October 15, 2016
More info at: http://www.grss-ieee.org/wp-content/uploads/2016/04/Call_for_Paper_ArgoGeoinformatics2016.pdf

3. GeoForAll Grows Its Grass Roots

Helena Mitasova Interview on Directions Magazine.

Take a look at the interview given by Helena Mitasova, North Carolina State University, member of the OSGeo Foundation Board of Directors. (http://www.directionsmag.com/entry/geoforall-grows-its-grass-roots/469520)

4. The first gvSIG Festival was held from May 23rd to 27th, and the presentations are now available at this link: http://www.gvsig.com/en/events/gvsig-festival/1st-gvsig-festival/communications. This was a virtual conference about free geomatics with 25 presentations in English, Spanish, Portuguese, Turkish, and Russian.

5. The Southeast US has started a new QGIS users group, who met for their first time on June 20 in Chattanooga, Tennessee, for an introduction to QGIS presentation to people who know GIS. Join the mailing list https://lists.osgeo.org/mailman/listinfo/southeast-us if you are in the area and would like to stay updated on future meetups.

6. The GRASS GIS Raleigh group meets on Saturday, July 9. There are plenty of things to do at these meetups. For example, you can test the upcoming 7.2 release of GRASS GIS or see the work being done on cartography in GRASS GIS during the Google Summer Code. The group meets at the Hunt library at NC State Centennial Campus at 1:30 PM. You are welcome to join any time during the afternoon in the room 4502 called Fishbowl. Details are available at https://grasswiki.osgeo.org/wiki/GRASS_GIS_Raleigh_meetups_2016

7. IEEE has put out a call for papers regarding "Advances in Agro-geoinformatics Research and Application." The full announcement can be seen at this link: http://www.grss-ieee.org/wp-content/uploads/2016/04/Call_for_Paper_ArgoGeoinformatics2016.pdf

8. New Lab in the Network. We are very glad to announce a new Lab of GeoForAll network at the Harokopio University of Athens, Greece.

In the last few years they have been using open source GIS and statistics software for research and education in the Department of Geography, Harokopio University of Athens, Greece. This mainly involves QGIS, R, and RStudio.

They have developed and are maintaining a package for spatial analysis (lctools in CRAN https://cran.r-project.org/web/packages/lctools/index.html), and Stamatis Kalogirou (skalo@hua.gr), the point of contact, also wrote a book in Spatial Analysis with a CC license (available at https://repository.kallipos.gr/handle/11419/5029?locale=en in Greek). They are involved in teaching 8 modules, including Introduction to Cartography, Spatial Analysis, and Geoinformatics Applications Development.

Welcome to the new Lab!