GeoForAll
Monthly Newsletter

Be part of "Geo for All"

Editorial

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Greece

Dear Members of the Network,

As you may have read in the previous issue (February 2017), the Newsletter was asking for a new co-editor to cover part of the European region. That was because Elżbieta Wołoszyoska-Wiśniewska (Ela) could not continue offering her services to the Newsletter due to a very loaded program in her work. But, as she said, she will always be with us, sending news and information to the Newsletter.

From this point I would like to express my sincere thanks to Ela for all she has done so far for the Newsletter. She will always be a valuable partner to the Newsletter and to GeoForAll Action.

Her position did not stay empty for long. We had two candidates who are dedicated in Free and Open Source Software, each from his/her own view.

Seraphim Alvanides (s.alvanides@northumbria.ac.uk) is an urban social geographer, with expertise in quantitative methods and Geographical Information Systems and Science.

He is appointed Reader with the School of the Built and Natural Environment at Northumbria University, UK.

Codrina Maria Ilie (codrina@geo-spatial.org) is a PhD student at the Groundwater Engineering Research Center "CCIAS" - Technical University of Civil Engineering in Bucharest, Romania, with main research focus on urban hydrogeology geodata management. She is also working as an open data expert at Terrasigna, where her research is based on extending informational services based on Earth Observation data using open data.

Her spare time has been dedicated to the geo-spatial.org community for over 9 years, serving as a board member since 2009.

Each one of them is responsible for a different European region to get news and information. They "share" Europe with Antoni Perez Navaro who is still working for our Newsletter. For this reason we had to re-arrange the countries of their responsibility in order to allocate the countries according to their interest.

I would like to welcome both as our new editorial members and wish them any success in their work.

Finally, it would be a nice idea to expand our co-editors network in other continents too. We are seeking for one co-editor in Central America and one in Oceania. If you know anyone involved in OSGeo / FOSS4G in those areas that would like to help with our Newsletter, do not hesitate to propose (you can propose yourself too).

Nikos Lambrinos
Chief Editor

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Editorial Board

GeoForAll

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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**
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  - 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/).

- Currently, nearly 800 million people struggle with debilitating hunger and malnutrition and can be found in every corner of the globe. That is one in every nine people, with the majority being women and children. The Global Open Data for Agriculture and Nutrition (GODAN) [https://www.nottingham.ac.uk/genius/documents/godan-uon-intro.pdf] supports 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. A core principle behind GODAN is that a solution to Zero Hunger lies within existing, but often unavailable, agriculture and nutrition data.

  The Netherlands Ministry of Economic Affairs, CABI, GODAN, CTA, and Wageningen UR partnered to organise the 3rd Workshop on Creating Impacts with Open Data in Agriculture and Nutrition [https://www.nottingham.ac.uk/genius/documents/godan-uon-intro.pdf]. The workshop was hosted at the Ministry of Economic Affairs in the Hague in February, 13-15. Suchith Anand kindly shares the ideas that he presented for the GODAN Capacity Development WG [http://www.godan.info/working-groups/capacity-development] at the Hague meeting.

  Details at https://www.slideshare.net/SuchithAnand/godan-working-group-on-capacity-development

  Anyone interested to join the GODAN WG on Capacity Development and contribute to education and training on Open Data in food and agricultural sciences is welcome. This is open and free to all interested. Join at https://dgroups.org/fao/godan_cd

2. A) Lab of the Month

GEOlab , Politecnico di Milano, Italy

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 GEOlab (Geomatics and Earth Observation Laboratory, http://geolab.como.polimi.it) at the Politecnico di Milano, Italy, as our "GeoForAll" lab of the month. **GEOlab** is a multi-disciplinary, multi-department research group established at Politecnico di Milano, Italy, focused on collecting, modeling, analysing, and representing Earth observations. Core research includes the following topics: GIS, cartography, global gravity models, GNSS (monitoring and navigation), remote sensing, photogrammetry, and signal processing.

Fig 1 – Polimappers @ GEOlab

The GIS research group, lead by Prof. Maria Antonia Brovelli and Dr. Marco Minghini, is active in the research fields of Web Mapping, multi-dimensional visualization and virtual globes, spatial statistics, Volunteered Geographic Information (VGI), geo-crowdsourcing, and Citizen Science. The team has a long and outstanding tradition in the use and development of open source geospatial solutions. The main software packages used include GRASS GIS, QGIS, PostGIS, GeoServer, MapServer, OpenLayers,

Leaflet, PyWPS, istSOS, Rasdaman, and NASA World Wind.

Fig 2 – FOSS4G-Europe participants

GEOlab is a great example of linking GeoForAll synergies with all key initiatives in Europe and globally. In addition to GeoForAll, GEOlab is officially affiliated to the AGILE network of laboratories. Members of the GIS GEOlab team are personally involved in a number of national and international associations, including SIFET (Italian Society for Photogrammetry and Topography), ASITA (Italian Federation of Scientific Associations for Environmental Information), GIT (Geosciences and Information Technologies), OSGeo (Open Source Geospatial Foundation), ISPRS (International Society of Photogrammetry and Remote Sensing), ICA (International Cartographic Association), HOT (Humanitarian OpenStreetMap Team), UN-GGIM (United Nations Global Geospatial Information Management) Academic Network, and UN Open GIS.

Some projects which are currently ongoing or just finished include giCASES - Creating a University-Enterprise Alliance for a Spatially Enabled Society, funded by Erasmus+ programme of the European Union; URBAN GEO BIG DATA (Urban Geomatics for Bulk Information Generation, Data Assessment and Technology Awareness), funded by the Italian Ministry of Education; MIGRATE (MIGRation pATterns in Europe) and City Focus, developed within the MYGEOSS project, which has received funding from the EU H2020 research and innovation programme; and The Paths of Regina – Crossborder paths linked to Via Regina, funded by the Interreg Italy-Switzerland Co-operation Programme 2007- 2013.

GEOlab is active in many other fields. Over the last couple of years, a number of humanitarian mapathons were organized by the GEOlab staff thanks to the links with HOT, e.g. for the OSM GeoWeek 2015 and 2016 and after the earthquakes in Nepal and Ecuador. A very special and successful mapathon with more than 200 ten-year-old children was held in March 2016; see this post on HOT's blog. (see Fig 3 and 4).

Fig 3 - Kids Map Swaziland for Malaria Elimination

Fig 4 - Kids Map Swaziland for Malaria Elimination

Members of the GEOlab team have recently founded PoliMappers, the first European chapter of the YouthMappers students' network having the purpose of building a young generation of mappers through open source and open data (OpenStreetMap). GEOlab organized a number of activities for the last MeetMeTonight, a national event where all Italian universities opened their activities to the public. Also, members of GEOlab have participated as speakers at local TED events; e.g. see this speech of Prof. Brovelli at TEDxLakeComo 2015 and this one of Dr. Minghini at TEDxYouth@LakeComo in 2012.

Since the first edition in 2013, GEOlab is among the organizers of the popular NASA World Wind Europa Challenge, which looks for urban management solutions serving the EU INSPIRE Directive developed using World Wind's open source technology. GEOlab

has also organized a number of conferences in the field of GIS and open source geospatial software: the First Meeting of the Italian GRASS users in 2000; the WebMGS 2010, 1st International Workshop on Pervasive Web Mapping in 2010, Geoprocessing and Services; and the FOSS4G Europe 2015. Finally, since 2016 a new MSc Degree in Geoinformatics Engineering (fully taught in English and welcoming students from all over the world) has been established at Politecnico di Milano, where GEOlab staff is primarily involved in teaching.

On behalf of the GeoForAll community, we thank Maria, Marco, and all colleagues from the GEOlab for their contributions to the GeoForAll initiative and look forward to working and building more collaborations with all interested on this education mission.

Best wishes,

Suchith Anand

B) GeoAmbassador of the Month

Dr. Tuong-Thuy Vu

Dear colleagues,

It is my great pleasure to introduce our excellent colleague Dr. Tuong-Thuy Vu as our GeoAmbassador. Dr. Tuong-Thuy Vu is an Associate Professor of the School of Environmental and Geographical Sciences, University of Nottingham, Malaysia campus (UNMC).

A geospatial scientist by training and research, Dr. Vu has over 15 years research and teaching experiences across Eurasia. He obtained his Master and PhD from Asian Institute of Technology in 2000 and 2003, respectively, and started exploring open-source tools at the early stage. After his PhD, he worked as a research scientist at Earthquake Disaster Mitigation Research Center, Kobe, Japan, (2003-2006) before joining Chiba University as a postdoctoral researcher in 2006-2007. In both places, he focused on the employment of geospatial technologies in disaster mitigation and management. He then joined the GEO Grid team of National Institute of Advanced Industrial Science and Technology (AIST) Japan, to further expand the research onto a high-performance computing platform. In 2008, he went back to university to develop his academic career at Geoinformatics Division, Royal Institute of Technology, Sweden. In early 2011, he took the position at University of Nottingham, Malaysia campus and assisted the establishment of the School of Geography and new MSc programmes at the campus.

In late 2011, he established his OSGEO research lab (OSGEO.UNMC) [1], the first-of-its-kind in Southeast Asia, and soon became among the first members of GeoForAll. OSGEO.UNMC aims at promoting open-source philosophy in education and research on geospatial science. The team developed the material to fully deploy OSGEO tools in teaching at the postgraduate level and introduced them as an alternative tool for undergraduate students doing their final year project. In teaching and learning, the OSGEO.UNMC team promotes not only using open-source tools, but also instructing a new way of open learning, including an open-mind, freedom, sharing, and collaboration. There is a certain improvement of geospatial knowledge and skills for students when moving to an open-source way, especially the confidence to try any available tools to address a specific issue.

Fig. 1. AgriGIS 2012

OSGEO.UNMC has been working very closely with the Nottingham Geospatial Institute (NGI) team from the beginning. Together, we organised the AgriGIS 2012 (Figure 1), bringing together researchers and practitioners in agriculture and geospatial science. It was the first public event to broadcast the name of OSGEO.UNMC to the region. In addition to presenting at many public events, conventions, and conferences to introduce OSGEO and open geospatial science, Dr. Vu coordinated the establishment of the OSGEO Malaysia chapter (Figure 2). He also leads the team organising a series of training to the public (Figure 3) [2] [3]. In 2017, he is planning to assist the establishment of two new OSGEO labs in Vietnam universities.

Fig. 2 OSGeo Malaysia

OSGEO.UNMC is developing its strong research activities on geobig data analytics. The team was awarded good national and international funding to work on remote sensing data fusion, change detection, image analysis services, and crowd-sourced data quality.

Fig. 3. Training the public

In collaboration with its partners, OSGEO.UNMC promotes open geospatial science via collaborative research projects like urban construction management, urban green space, megafauna index mapping, and agricultural management.

Geo for All is a worldwide movement that provides immediate benefit to the world. We aim to create openness in Geo Education for developing creative and open minds in students, which is critical for building open innovation and contributes to building up Open Knowledge for the benefit of the whole society and for future generations. We are proud to honour Thuy as our GeoAmbassodor, and we are extremely grateful for his contributions to Geo for All. Thuy is a great ambassador for Open Geospatial Science globally.

I am grateful for this opportunity of introducing some of our amazing colleagues from different parts of our world each month as our GeoAmbassadors and get inspired by their amazing work and contributions for the wider community.

Best wishes

Suchith Anand

[1]http://www.nottingham.edu.my/EGS/Research/GeospatialScience/OSGEO-lab.aspx

[2]https://blogs.nottingham.edu.my/geography/2016/03/01/gis-information-workshop/

[3]https://blogs.nottingham.edu.my/geography/2016/02/28/ensearch-gis-training-by-osgeo-lab/

3. Events

- There will be a Free and Open Source GIS one day meeting happening in Knoxville, TN, USA, on 19 May 2017 at the University of Tennessee in Knoxville. More information available here: https://wiki.osgeo.org/wiki/Knoxfoss4g20170519

4. Conferences

Asia

March 2017

1. 20-21 March: Global Forum for Innovations in Agriculture (GFIA)
Deadline August 31st. Abu Dhabi National Exhibition Centre, UAE.

September 2017

2. 18-22 September: WebMGS 2017 (during the ISPRS Geospatial Week).
Venue: Wuhan, China.

Africa

June 2017

3. 25 June- 1 July FOSS4G 2017 Africa 2017

The OSGeo Africa chapter and the QGIS South Africa User Group Conference invite you to participate and present at the first regional FOSS4G event in Africa and the first national QGIS User Group Conference in South Africa.
Venue: St John's College, Johannesburg, South Africa
Important dates:
Abstract submission: 31st March 2017
Notification of acceptance: 30th April 2017
Submission of revised abstracts: 15th May 2017
Early Bird Payments for conference: 20th May 2017
Full Conference registration payment for presenters: 6th June 2017
Full Papers for Proceedings or submission to Journals: 31st July 2017

4. 27-30 June: FOSS4G Southern Africa overlap with GeoforAll + SAGTA conference
Venue: Johannesburg, South Africa

Europe

March 2017

5. 21 March: 1st International Workshop on Big Geo Data Quality and Privacy (BIGQP 2017)
Venue: Venice, Italy

6. 21-24 March: EDBT/ICDT Joint Conference
Venue: Venice, Italy

April 2017

7. 23-28 April: European Geosciences Union General Assembly 2017.
Venue: Vienna – Austria

May 2017

8. 9 May: VGI-Analytics 2017
Venue: Wageningen University, The Netherlands.

June 2017

9. 1-2 June: Jornadas SIG Libre. XI days of free GIS in Girona
Venue: Univerisyt of Girona, Spain.
"The GIS Free Conferences are a reference event in the area of free technologies in the field of geographic information. They are a meeting point where to share knowledge, experiences and create synergies between users and programmers. A space to show news and trends and reflect on debates that fit the context of free geospatial technologies."

10. 6-8 June: Geo IoT World 2017.
Venue: Brussels, Belgium).

July 2017

11. 10-14 July: XVI Biennial IASC global conference Practicing the Commons
Venue: Utrecht, the Netherlands.

12. 18-22 July: FOSS4G Europe 2017

Venue: Paris, France.
FOSS4G-Europe 2017 will be held in Marne-la-Vallée , France on July 18th-22nd 2017. The third edition of the conference is organized at École Nationale des

Sciences Géographiques (ENSG). Our event aims at bringing Open Source GIS users and developers together and fostering closer interactions amongst the European geospatial communities. Following an established tradition, FOSS4G-Europe organizes an academic track which will run as a single-track over one day. FOSS4G-Europe invites original research contributions scientific papers dealing with Open Data, Open Software, Open Hardware, and Open Science in general are highly welcome. Submissions focusing on INSPIRE, Big Data, and Societal Challenges are particularly encouraged. All types of papers are welcome, such as on results achieved, case studies, work in progress, and demos. We discourage, however, mere presentations of technology or use cases without properly justifying it.
Submission deadline: March 17, 2017
Acceptance notice: April 14, 2017
Camera ready version: May 15, 2017
Conference: July 19, 2017
Details at
http://europe.foss4g.org/2017/Academic_Track

September 2017

13. 6-8: INSPIRE Conference 2017

North and Central America and the Caribbean

March 2017

14. 20-24 March: The World Bank Land and Poverty Conference 2017: Responsible Land Governance - Toward an Evidence Based Approach
Washington, DC, USA.

May 2017

15. 19 May: Free FOSS4G Meeting
Venue: Knoxville, Tennessee, USA

16. 22-25 May: CalGIS 2017/LocationCon
Venue: Oakland, California, USA

July 2017

17. 2-7 July: 28th International Cartographic Conference (ICC) of the International Cartographic Association.

Washington, DC, USA

More details in Section 17 "Ideas/Information" about the event "Different Fields - One Cartography" organized within the activities before the 28th International Cartographic Conference of the International Cartographic Association (ICA).

August 2017

18. 14-19 August: FOSS4G Boston.
Boston, Massachusetts, USA.

September 2017

19. 26-30 September: VIII Surveying Convention "AGRIMENSURA 2017"
Venue: Havana Libre Tryp Hotel, Havana. Cuba.

October 2017

20. 4-6 October: 2nd International Conference on Smart Data and Smart Cities
Venue: Puebla, Mexico.

6. Courses

- A free course in Spanish for introduction to cooperation to development:

https://formacion.isf.es/curso/introduccion-los-sig-para-la-cooperacion-al-desarrollo/

- Feeding a Growing Planet: Agriculture, Nutrition and Sustainability explores the key challenges to ensuring a healthy and sustainable diet for our growing world population, as well as the central role of agriculture in achieving the Sustainable Development Goals. The course, which starts on 20 March 2017, is led by Achim Dobermann of Rothamsted Research and also features Jessica Fanzo of Johns Hopkins University, Ken Giller of Wageningen University, Upmanu Lall of Columbia University, Michael Lee of Rothamsted Research, William Masters of Tufts University, Rebecca Nelson of Cornell University, and Johan Verreth of Wageningen University.
The agriculture sector is a critical player in sustainable development; it is at the heart of issues such as food security, malnutrition, ecosystem management, and

the responsible production and consumption of food. However, without the proper policy frameworks and programs to guide our global food system, there is the risk of exacerbating inequality and harming our environment.

This course provides a historical overview of the past 50 years of agricultural development, the consequences of continuing along this trajectory, and key levers for improvement. The course highlights key technological advancements and interventions to produce more and better quality food while simultaneously achieving social and environmental goals.

By joining this course, you are becoming part of a global movement of citizens and practitioners committed to revolutionizing the way we think about our food system. The success of the course depends on an active student base that represents a diversity of experiences, geographies, and perspectives.

Add your voice to the global discussion by registering today!

Course Structure and Requirements:

The course is structured around a series of pre-recorded lectures, readings, quizzes, discussion forums, and other activities. Each of these course components can be completed at a time that is convenient for the student, and most quizzes and timed activities are given a two-week window for completion. The material for each week is made available each Monday, and once the material has been opened, it remains open for the duration of the course.

In addition to the asynchronous components of the course, the instructors will hold real-time Google Hangouts to encourage students to ask questions and engage directly with the instructors. These Hangouts will be announced 1 to 2 weeks in advance.

The estimated time commitment to complete all course components is 4-6 hours per week, though this depends heavily on the student and his/her objectives in taking the course.

All students who successfully complete the course will receive a digital certificate of completion, signed by the instructors. In order to successfully complete the

course, students must score an average of 70% or higher on the quizzes and final exam, all of which are multiple choice. Students that score 85% or higher will receive certificates of completion with distinction. While this course is not credit granting, we encourage students to work with their own institutions to explore the option of granting credit for online coursework.

If you have any additional questions on the course structure or requirements, please email the SDSN Education Initiatives Team at sdgacademy@unsdsn.org. For technical questions about the platform, please email, support@edcast.com.

You can enroll here: https://courses.sdgacademy.org/learn/feeding-a-hungry-planet-agriculture-nutrition-and-sustainability-march-2017#

Syllabus
Module 1. The global challenges around food
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1.2 Global challenges around food

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1.5 Case study 3: Livestock

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5.4 Sustainable livestock systems

5.5 & 5.6 Functional diversity I & II

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7.2 Monitoring change

7.3 Mechanisms to stimulate change

7.4 Investing in science

7.5 What can I do?

7. Training programs

- GeoForAll educational inventory system, a place to search and share educational materials

- Over the first week of January 2017, a group of 60 secondary school students gathered at Marian University College, Bagamoyo, for a ground-breaking training session, the Science Technology Engineering and Mathematics (STEM) Youth Boot Camp, organised by Projekt Inspire in collaboration with the Ramani Huria team. These students, hailing from different regions of Tanzania (Dar es Salaam, Moshi, Arusha, Mbeya, to name a few), were there to be introduced to GIS and web mapping.

More details at https://hotosm.org/updates/2017-01-26_ramani_huria_trains_secondary_school_students_during_stem_boot_camp

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

- Google Earth Enterprise is going Open Source https://www.geospatialworld.net/google-earth-enterprise-open-source-github/

11. Free Books, educational materials, etc.

- Spanish free book about spatial analysis: https://dialnet.unirioja.es/servlet/libro?codigo=667265

- A new free book in Spanish about dealing with satellite images and how to orto-rectificate them.
http://www.tysmagazine.com/ortorrectificacion-imagenes-satelitales-landsat/

- Another free book in Spanish. The book exposes examples of the vast potential of geoinformatics, to generate data that allow to transform the environmental and social reality from the trenches of classrooms and university work.

http://www.tysmagazine.com/libro-gratuito-geoinformatica-aplicada-procesos-geoambientales/

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

BIM: Building Information Modelling

CAADP: Comprehensive African Agricultural Development Programme

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

MIL: Media and Information Literacy

MoU: Memorandum of Understanding

NAD: North American Datum

NEPAD: NEw Partnership for African Development

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

RUFORUM: Regional Universities Forum for capacity building in agriculture

SDI: Spatial Data Infrastructure

SQL: Structured Query Language

STISA 2024: Science Technology Innovation Strategy for Africa

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

WISERD: Wales Institute of Social & Economic Research, Data & Methods

WMO: World Meteorological Organization

WMS: Web Map Service

WMTS: Web Map Tles Servises

WPS: Web Processing Service

MIGRATE – an open source application to educate and raise awareness about migration in Europe

By **Dr. Marco Minghini** – Research Fellow at GEOlab - Department of Civil and Environmental Engineering, Politecnico di Milano, Italy

MIGRATE – MIGRation pATterns in Europe [1,2] is a Web mapping gaming application aimed at educating and raising awareness about the phenomenon of migration in Europe. Although migration is an extremely important and urgent issue in Europe, especially in the Mediterranean area, there is still a

lack of information and many misconceptions about the nature and extent of this phenomenon. Thus, MIGRATE seeks to raise awareness about migration while also studying and analyzing the degree of knowledge and perception of the general public.

MIGRATE has been developed by a team of researchers [3] from Politecnico di Milano (Italy) within the third call of MYGEOSS project [4], which has received funding from the European Union's Horizon 2020 research and innovation programme.

MIGRATE makes full use of open data [5] released from the United Nations High Commissioner for Refugees (UNHCR), the International Organization for Migration (IOM), The Migrants' Files project, Eurostat (the European Union statistic office), and the OpenStreetMap project. MIGRATE is fully developed using open source software, as shown in Figure 1. While the server side is developed in Python, is based on Django, and uses a PostgreSQL database, the client side is developed using HTML5, CSS3, Bootstrap, and JS libraries like jQuery and OpenLayers. MIGRATE is released as open source under the EU Public License (EUPL). The application code is available at [6].
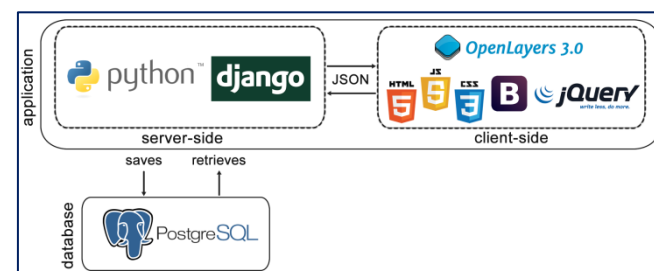

Figure 1. MIGRATE open source architecture.

Playing MIGRATE requires an anonymous registration. Each game is composed of 6 questions of different kind: true/false, multiple choice, map-based (i.e. the player answers by clicking a country on the map) and text-based (i.e. the player answers by entering a number). Figure 2 shows an example of a map-based question. Two out of the 6 questions are different depending on the player's country of origin which is defined during the registration phase. In addition, each of the 6 questions is randomly extracted from a predefined set of 20 questions so that when playing multiple times there is a low probability of being asked the same questions. For each question a limited
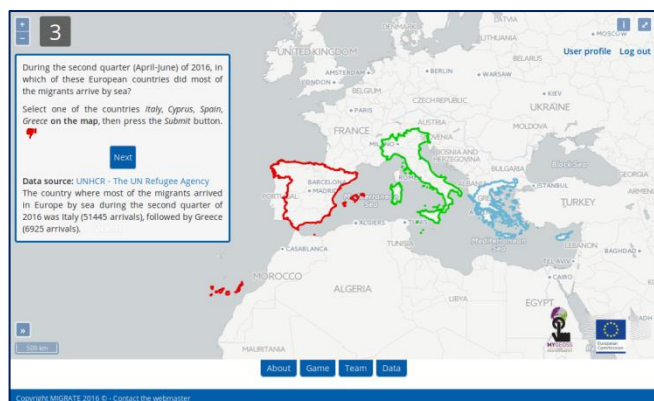
time (30 seconds) is given to answer.

Figure 2. Screenshot of a map-based question in MIGRATE.

The first MIGRATE challenge [7] took place from 6 December 2016 to 5 January 2017. Over 300 users from 42 world countries have played more than 15k games. The top 10 players were awarded with Amazon vouchers.

The research team is now in the process of analyzing the collected data in order to understand which is the players' perception of migration and whether playing the game has helped in increasing the knowledge and awareness about this phenomenon. While playing MIGRATE is always possible, a second challenge with new awards may be organized in the future. Anyone who is interested to collaborate is welcome to contact the research team.

[1] http://geomobile.como.polimi.it/migrate
[2]https://www.youtube.com/watch?v=Z5789ijmyxU&t=11s
[3] http://geomobile.como.polimi.it/migrate/team
[4] http://digitalearthlab.jrc.ec.europa.eu/mygeoss
[5] http://geomobile.como.polimi.it/migrate/data
[6] https://github.com/kilsedar/migrate
[7] http://geomobile.como.polimi.it/migrate/challenge

13. Scholarships for students and staff

1. Unas oportunidades para hacer el doctorado en el Reino Unido para estudiantes latinoamericanos. Los proyectos son:

- Crop modelling for crop performance PhD – Aberystwyth University

- Early warning of crop production problems PhD – Aberystwyth University

- Improving agriculture using radar satellite images – Open University

Candidates must be nationals from a Latin American country and will be based primarily in Milton Keynes, UK. The ability to deliver your PhD research within the project timeframe and flexibility to travel between UK and project locations in Peru/Colombia as part of the international project team are essential. The PhD program will start in September 2017 and must be completed by August 2020.

For more information contact armando.marino@open.ac.uk by email. Armando Marino is a lecturer in Electronics and Signal Processing within the School of Engineering & Innovation at The Open University.

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. Dr. Gaurav Aggarwal is Public Health Specialist & Anti Malaria Officer at National Vector Borne Disease Control Programme (NVBDCP) in India. He is doing excellent work in HealthGIS. Gaurav has promptly established Open Source GIS in Chandigarh and expands capacity building in HealthGIS across India. He and his colleagues are very welcome to GeoforAll.

3. For those who would like to do a webinar about FOSS4G for GeoFor All, Rafael Moreno-sanchez

(Rafael.Moreno@ucdenver.edu) collects new proposals.

Great way to showcase your work or ideas, have it recorded, and made available to a broad audience in the Geo4All YouTube Channel.
It is very simple:
Prepare your slides.
Tell us about your work/ideas for up to 50 min.
We record and post to YouTube Channel.
You can use your webinar recording as a presentation card for introducing your work or ideas.

Anything that creates excitement and interest about FOSS4G is great.
For example:
 Research, service, or education activities.
Applications.
Discussion of issues/ideas, challenges, advantages, regarding the use of FOSS4G, etc.
"Why I use FOSS4G in my organization?"
 "FOSS4G in country or organization X"
"How to get started with FOSS4G in X or Y conditions or organization"
"What would help me to get started with FOSS4G"
Etc.

4. Sergio Acosta y Lara, from Departamento de Geomática, Dirección Nacional de Topografía, Ministerio de Transporte y Obras Públicas in URUGUAY introduces to us Paulo Cesar Coronado Sanchez and colleagues from Universidad Distrital Francisco José de Caldas (Bogotá, Colombia). Paulo leads the process of establishment of a GeoForAll lab at his University (called OSGeoLab UD) and has deep concerns regarding GeoForAll mission. His lab is #18 in the table of GeoForAll labs, replacing an inactive one. He will be soon adding information of his lab to it.
Warm welcome to Colombian colleagues!

5. The ICA Commissions Cartography and Children, Maps and Graphics for Blind and Partially Sithed People, and Planetary Cartography have the pleasure to invite all the interested colleagues to participate in this Joint Workshop, DIFFERENT FIELDS - ONE CARTOGRAPHY. The main aim of the workshop – as can be deduced from reading the title – is to give an opportunity to the members of the three Commissions (and participants in general) to share and know the results of latest and most representative research developed in the topics covered by our Commissions during the last years. Deadline for the submission of full papers: March 30.

6. **A message from Patrick Hogan regarding the OpenCitySmart Initiative**:

The Open Source Geospatial approach is the essential 'cooking' method for any master chef interested in sustainable world-class cuisine.
An OSGeo OpenCitySmart app could well serve as a seed crystal to engage cities in collectively advancing urban management capabilities, needs that are essentially the same for every other city on the planet.
Affluent cities could fund development of capabilities that would directly benefit other 'less endowed' cities around the world.
https://wiki.osgeo.org/wiki/Opencitysmart
The DelBianco Foundation of Florence Italy is funding development of OpenCitySmart. The premier release will take place in Florence, on March 12-13.
All are welcome!
www.lifebeyondtourism.org/evento/991/
The presentation:
https://docs.google.com/presentation/d/1VEPkjJaa2AdcWA6_15CuInFMxaSaxI3yvDUeTFPw6xc/
The city of Springfield Oregon, Kodiak Alaska, and New York City are engaged in testing.
Additional support is coming from ESA, Trilogis, Sinergise, Solenix and TrilliumLearning, as well as Politecnico di Milano at Como, thanks to Prof Maria Brovelli and her graduate students.
And GODAN is also moving in this direction! www.godan.info

7. Very interesting article on How NASA and the UN are using location intelligence to build smart cities in developing countries is at https://www.devex.com/news/how-nasa-and-the-un-are-using-location-intelligence-to-build-smart-cities-in-developing-countries-89721