

Geo for All

Open Geospatial Science

Suchith Anand



Open Geospatial Labs are being established worldwide to scale up research and teaching globally as part of the ICA-OSGeo MoU



Suchith Anand

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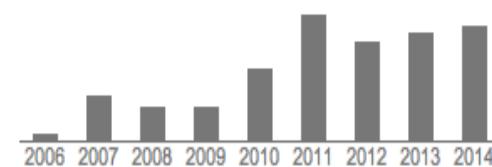
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Co-authors [View all...](#)

Mike J Jackson

Jeremy Morley

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Lucy Bastin

Andrew Thomas Crooks

Sarah Sharpley

Title 1-20

Cited by

Year

Automated production of schematic maps for mobile applications

J Mark Ware, GE Taylor, S Anand, N Thomas

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26

2006

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S Anand, S Avelar, JM Ware, M Jackson

GISRUK 7, 2007

17

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Automated schematization for web service applications

J Swan, S Anand, M Ware, M Jackson

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Geospatial information integration for authoritative and crowd sourced road vector data

H Du, S Anand, N Alechina, J Morley, G Hart, D Leibovici, M Jackson, ...

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12

2012

Data mash-ups and the future of mapping

M Batty, A Crooks, A Hudson-Smith, R Milton, S Anand, M Jackson, ...

11

2010



Open Nottingham

Knowledge without borders

www.nottingham.ac.uk/open



“Geo for All”

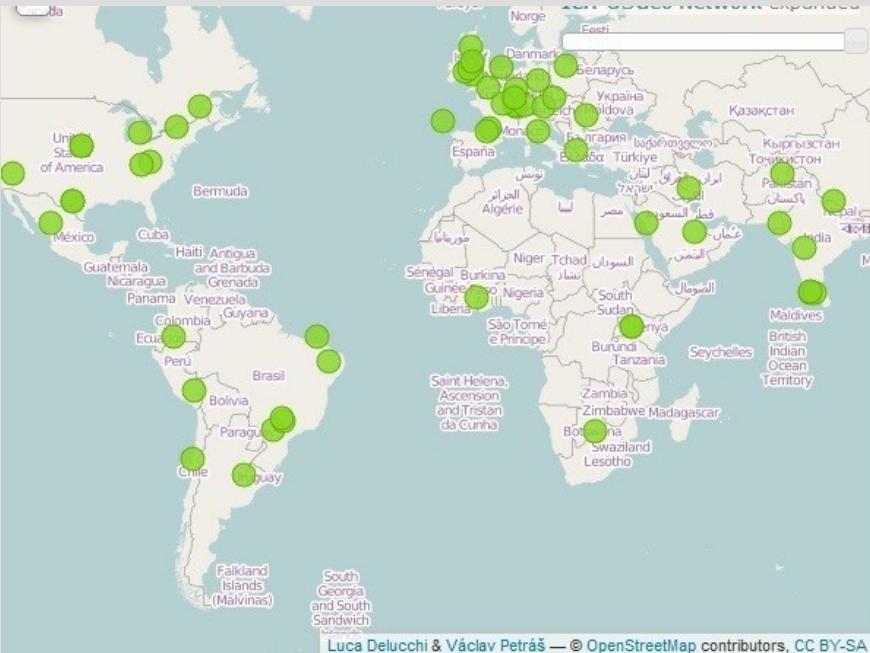
Making Geospatial
education and
opportunities
accessible to all

From Geo for Some to Geo for All

Kate Chapman/@wonderchook
Humanitarian OpenStreetMap Team



“Geo for All” Team



ICA-OSGeo MoU in Sep 2011

Over 100 labs established worldwide as of today

North America – over 20 labs

Europe – over 40 labs

South America – 9 labs

Africa – 4 labs

Asia – 15 labs

Australia - 2 lab

Will be establishing over 500 labs in universities worldwide by 2018

“Geo for All” started from very humble beginnings

Aim – Build research and teaching infrastructure worldwide

Problem – No initial funding!

Biggest Strength – amazing support from colleagues and students



June 2010

Open Source Geospatial Lab founding meeting at UoN



Aim

Establishing open source GIS research and training opportunities



Who are we?



We are Global community

OSGeo中国中心实验室，关注开源GIS，开放地理空间数据

开放地理空间实验室
Open Geospatial Laboratory of ICA

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输入关键字 搜索

使用SRTM数据制作丝绸之路地形图

最近更新

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Lab News

OpenSource GIS Summer School

2013-12-11 08:52:22 由stat2013lab 在Lab News 评论 #36 收藏

OpenSource GIS Summer School will be held in Wuhan University in 2014. The maximum number for the OpenSource GIS course will be a maximum of 35. Some initial information is at <http://www.lmars.whu.edu.cn/sprscm/summercamp.html>

« 上一篇下一篇 »

您可能也喜欢

Corporation of data-fitting models for chromatographic analysis by Yang, China
Editor: Chen Wang, Zhi Wang, Shuai-Bing Jiang, Hong Wang
Abstract: In this work, a new method for fitting chromatographic data was proposed. This method can be used to fit chromatographic data with different numbers of peaks. The proposed method is based on the correlation coefficient between the experimental data and the calculated data. The proposed method is more accurate than the traditional methods.

Dr. Zhang was invited to speak at the International Conference on Health and Safety in the Built Environment (HABE) 2013. Dr. Zhang joined the conference and presented his research findings.

A new paper was published in the journal "Journal of Health Politics, Policy and Law".
New paper was published in the journal "Journal of Health Politics, Policy and Law".

我要评论

Newspaper clipping from the Chinese newspaper "China Daily" about the OpenSource GIS Summer School.

Contact Us

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OSGeo Your Open Source Compass

ICA-OSGeo laboratory at University of Melbourne

The University of Melbourne is home to Australia's first Open Source Geospatial Laboratory. The international open source geospatial laboratory is a joint initiative of the International Cartographic Association (ICA) and the Open Source Geospatial Foundation (OSGeo). This Australian facility will be part of a global network of open geospatial research labs known as ICA-OSGeo labs. Currently there are 22 ICA-OSGeo labs operating globally.

"The University of Melbourne is one of the top research universities in the world and has been a pioneer in Australian geospatial science research. We are delighted to collaborate with the ICA and OSGeo to create this opportunity for our students and researchers, which will encourage open geospatial teaching and related research in other universities"

- Professor Tom Kvan, Dean of the Faculty of Architecture, Building and Planning.

Vision Statement

The ICA-OSGeo lab at the University of Melbourne will promote access and use of geospatial data for evidence-based research and decision-making. This will be achieved by the provision and sharing of data and tools supporting urban issues, with a capacity for extended collaboration across multiple disciplines.

Sustainable Cities

Newcastle University

SEARCH

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Map of Newcastle upon Tyne showing the location of the OSGeo lab.

Newcastle OSGeo lab is supported by

School of Civil Engineering & Geosciences

OSGeo ICA

Open Source Geospatial Lab Newcastle

The Open Source Geospatial Research and Education Laboratory (osgeolab) is located at the [School of Civil Engineering and Geosciences](#) at [Newcastle University](#) in the North of England. The lab is run by the [Geospatial Engineering Research Group](#) but draws heavily on interactions with other research groups and partners within the University, nationally and internationally.

Our mission, as part of the OSGeo worldwide network, is to develop collaboration opportunities for academic, industrial, and government organizations in open source GIS software and data.

Find out about our [Open Source Geo Research and development projects](#), our [training and education programmes](#) in OSGeo and relevant [publications](#). Other resources and downloads that we release as Open Source can be found in the [resources](#) section.

OSGeo/ICA Memorandum of Understanding

We are all passionate about Cartography

Malaysia Campus

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University of Nottingham, Malaysia

> School of Geography > Research > Geospatial Science > OSGeo lab

School of Geography

- Welcome
- Courses
- Careers
- Research
- Water Resources
- Tropical Conservation Ecology
- Geospatial Science**
- Research Students
- Student experience
- Make an enquiry
- People

OSGeo lab

The Open-Source Geospatial Research lab was established late 2011 following the MoU signed between International Cartographic Association (ICA) and OSGeo foundation. It was the first of its kind in Southeast Asia and is playing its active role in promoting the similar establishment in the region.

Activities

- Researches on development and deployment of open-source geospatial resources in various applications.
- Develop open-source geospatial material for education and training.
- Promote open-source geospatial technologies applications in Malaysia and the region.

Current projects

- Deployment of OSGeo tools in teaching and learning (on-going, School of Geog)
- Remote sensing image understanding services on cloud-computing platform (or
- Remote sensing data synergy for monitoring large-scale construction projects (
- Terra SAR-X for monitoring large-scale construction projects (on-going, DLR)
- Crowd-sourcing interactive quality data assessment (on-going, CFFRC)
- Unmanned Aerial Vehicle (UAV) intercropping mapping (on-going, CFFRC)
- Urban growth monitoring with multi-scale remote sensing approach (completed)
- Multi-scale remote sensing disaster recovery monitoring (completed, GeoGRID,



IGAD CLIMATE PREDICTION AND APPLICATIONS CENTER

"Fostering Climate Prediction and Applications"

Home Products Data Portal WMO RCC MESA African Drought Monitor Applications About Us Check

ICPAC PRODUCTS AND BULLETIN

- 10 day Bulletin
- Monthly Bulletin
- Climate Watch
- Newsletter

STATUS OF THE CLIMATE

- WMO Update: Prepare for El Niño
- EL NIÑO/LA NIÑA UPDATE
- High Impact Weather
- El Niño Southern Oscillation Watch (EN)
- El Niño Southern Oscillation Watch (FR)
- Heavy Rainfall/Flood Risk
- ITCZ/TD
- SST Indices
- ITCZ/TD

FORECAST



BACKGROUND

In 1989, twenty four countries in Eastern and Southern Africa established a Drought Nairobi (the DMCN) and a sub centre in Harare (Drought Monitoring Centre Harare) weather related disasters. In October 2003, the Heads of State and Governments of the Development (IGAD) held their 10th Summit in Kampala, Uganda, where DMCN w

ICA-OSGeo OSGeo at ETH Zurich

Home : Team : Training : Research : Cooperation : Contact

Welcome to ICA-OSGeo Open Source Laboratory at ETH Zurich

Quality open source training and software for Cartography and GIS



The Open Source Geospatial Laboratory (OSGeo) at ETH Zurich is a joint initiative of the [International Cartographic Association \(ICA\)](#) and the [Open Source Geospatial Foundation \(OSGeo\)](#).

In September 2011, the International Cartographic Association (ICA) and the Open Source Geospatial Foundation (OSGeo) signed a Memorandum of Understanding ([full text here](#)) with the aim of developing on a global basis collaboration opportunities for academia, industry and government organizations in open source GIS software and data.

The OSL at ETH Zurich is actively implementing this memorandum with the vision to support the development of open-source geospatial software technologies, training and expertise. It also aims to provide support for increasing the number and quality of open source teaching and training materials for Cartography and GIS. As a proud member of the [ICA-OSGeo Network](#), the ETH Zurich OSL is focusing on Education, Open Geodata and on Cartographic and Geospatial Research. Additionally we are participating in the the [ICA Commission on Open Source Geospatial Technologies](#) and through the [Institute of Cartography and Geoinformation](#) we are an associate member of the [Open Geospatial Consortium](#).

NCSU OSGeoREL

Overview Projects Software Courses Publications Contact About

Open Source Geospatial Research and Education Laboratory

The NCSU OSGeo Research and Education Laboratory (NCSU OSGeoREL) is located at the [North Carolina State University, Center for Geospatial Analytics](#) in Raleigh, NC, USA. We are part of the worldwide network of ICA-OSGeo laboratories following the motto **Geo for All**. As one of the founding laboratories we are the central node for North America.

Our mission is to develop collaboration opportunities for academic, industrial, and government organizations in free and open source GIS software and data.

Follow us on [Google+](#), [YouTube](#) and [GitHub](#).

Offered courses

Through our [GIST program](#) we offer interdisciplinary, graduate level courses on geospatial analysis and modeling. Students are taught the fundamentals and methods in a software independent way by using both open source and proprietary tools. Go to [courses](#) and find out more.

People

Faculty:

[Helena Mitasova](#), [Laura Tateosian](#), [Ross Meentemeyer](#) ([home page at FER](#))

Graduate students and visiting scholars:

[Anna Petrasova](#), [Vaclav Petras](#), [Emily Russ](#), [Brendan Harmon](#), [Keren Cepero](#), [Nathan Lyons](#), [Paul Paris](#)

Former graduate students and visiting scholars:

[Eric Hardin](#), [Katie Weaver](#), [Margherita di Leo](#), [Eva Stopkova](#)

If you want to become a member of NCSU OSGeoREL or you feel as a part of it and you are not listed here, please do not hesitate to [contact us](#).



Acknowledgements

The ICA-OSGeo Open Source Geospatial Laboratory is kindly integrated in the [Institute of Cartography and Geoinformation](#).

Links



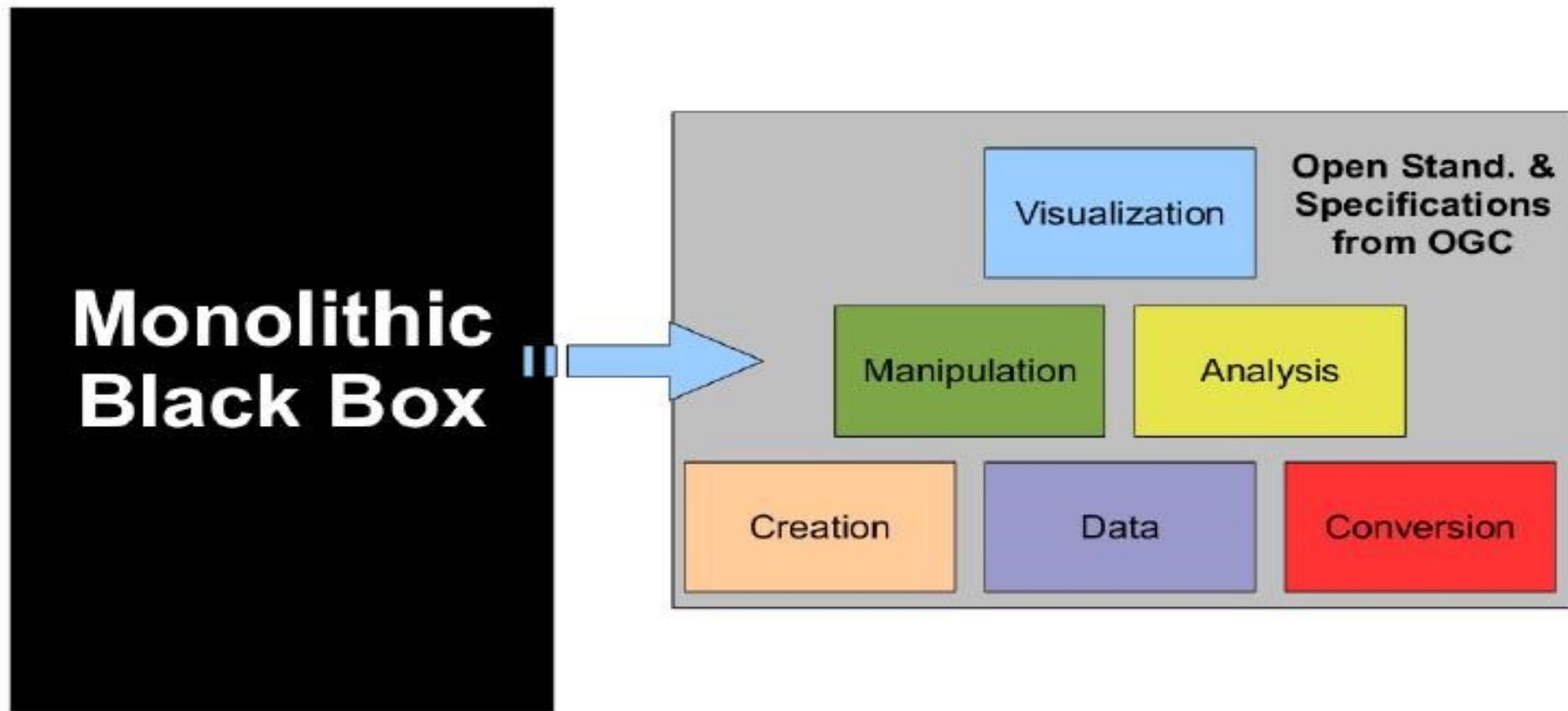
There are many dimensions to “Open”

- Open source software.
- Open data.
- Open standards.
- Open access to research publications.
- Open education resources

But fundamentally it is based on Open Principles

Science is NOT a Black Box

Today's Toolkit



Unique convergence of three key developments that made Open Geospatial Science possible

science [sahy-uhns] ? Show IPA

noun

1. a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws: *the mathematical sciences*.
2. systematic knowledge of the physical or material world gained through observation and experimentation.
3. any of the branches of natural or physical science.
4. systematized knowledge in general.
5. knowledge, as of facts or principles; knowledge gained by systematic study.

 EXPAND

Geospatial Standards (for ex. OGC spec.)

OGC[®]
Open Geospatial Consortium, Inc.

"M
Abo

Standards

▼ **OpenGIS® Standards**

- Catalogue Service
- CityGML
- Coordinate Transformation
- Filter Encoding
- Geographic Objects
- Geography Markup Language
- Geospatial eXtensible Access Control Markup Language (GeoXACML)
- GML in JPEG 2000
- Grid Coverage Service
- KML
- Location Services (OpenLS)
- Observations and Measurements
- Sensor Model Language
- Sensor Observation Service
- Sensor Planning Service
- Simple Features
- Simple Features CORBA
- Simple Features OLE/COM



Open Data



OpenStreetMap
The Free Wiki World Map

Search Where am I?

examples: 'Alkmaar', 'Regent Street, Cambridge', 'CB2 5AQ', or 'post offices near Lünen' [more examples...](#)

OpenStreetMap is a free worldwide map, created by people like you.

The data is free to [download](#) and [use](#) under its [open license](#). Create a [user account](#) to improve the map.

Ability for showing the operation of general laws is fundamental for scientific research

Maturity of open source software (for ex. OSGeo stack)

OSGeo Projects

- Web Mapping
deegree ◆
- Mapbender
- MapBuilder
- MapGuide Open Source
- MapServer
- OpenLayers

Desktop Applications

- GRASS GIS
- OSSIM
- Quantum GIS
- gvSIG ◆

Geospatial Libraries

- FDO
- GDAL/OGR
- GEOS ◆
- GeoTools
- MetaCRS ◆

Metadata Catalog

- GeoNetwork

Other Projects

- Public Geospatial Data Education and Curriculum

◆ Project in incubation

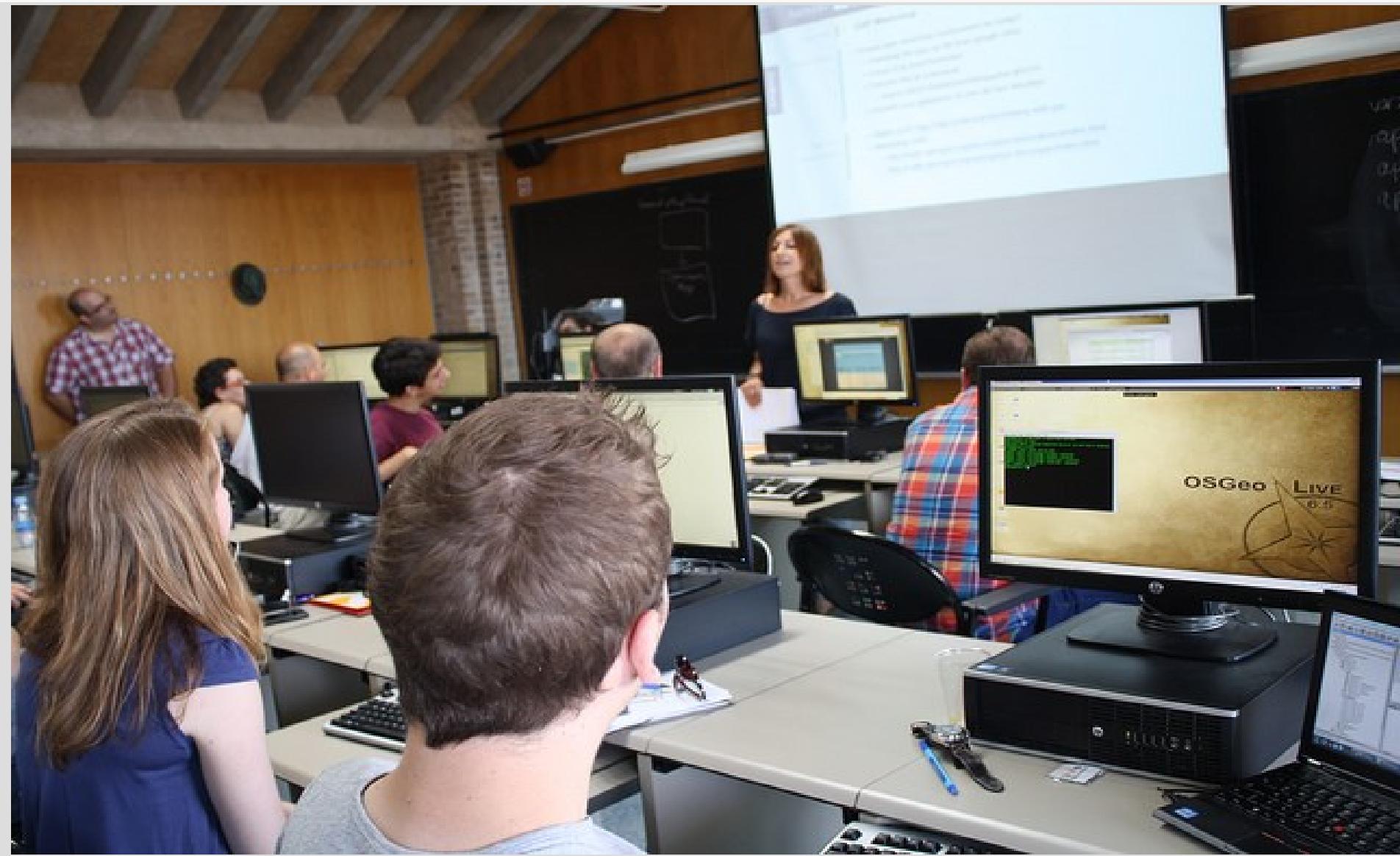
Open Source Geospatial Foundation (OSGeo) established in Feb 2006

OSGeo is the leader of Open Source Geospatial and high impact community

Project Development Statistics Updated: 2-Nov-2008				
Project (link to stats page)	Codebase Lines of code	Contributors	Effort (person years)	Est. cost \$USD
deegree	475,756	20	125	6,880,114
gvSIG	1,797,359	62	506	27,804,278
GEOS	93,369	14	23	1,252,806
Feature Data Objects (FDO)	770,748	22	212	11,679,154
GeoNetwork opensource	359,225	11	93	5,122,974
GeoTools	1,472,845	46	410	22,548,581
GDAL	619,706	26	170	9,357,931
Quantum GIS	193,174	34	50	2,761,972
OSSIM	525,942	21	143	7,846,712
GRASS GIS	518,049	61	140	7,682,948
OpenLayers	68,695	12	17	913,757
MapServer	108,306	32	27	1,499,454
MapGuide Open Source	360,959	34	95	5,240,110
Community MapBuilder	141,198	24	35	1,921,633
Mapbender	261,029	23	68	3,713,822
Total	7,766,360	442	2,114	116,226,246

OS Geo Product development statistics 2008

Open GIS Summer School in Girona



And empowering the next generation



Why having a framework for Open Geospatial Science important for the future?

Strategic level

Research

Teaching

Attracting research funding

/sustainability

Social Responsibility

Open principles is now implemented by the UK Government and delivering huge cost savings for government -£409 million in the first half of the year it was implemented alone.

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Government bodies must comply with Open Standards Principles

1 November 2012

From today all government bodies must comply with [Open Standards Principles](#), an agreed set of standards to make our IT more open, cheaper and better connected, Minister for Cabinet Office, Francis Maude said today.

The Open Standards Principles have been developed following the public consultation 'Open Standards: Open Opportunities – flexibility and efficiency in Government IT' which took place from February to June this year. The principles will help Government to deliver more innovative IT services and further drive savings and encourage more competition for government contracts.

There has been overwhelming support from the public and the IT community for setting an open standards policy for software interoperability, data and document formats:

- nearly 70 per cent of respondents believe the principles would improve innovation, competition and choice in the provision of government services; and
- over 70 per cent agree that they would help improve value for money.

Francis Maude said:

"We know that there are more real savings to be made in Government IT contracts – in the first half of this year, we have already saved £409 million on ICT services."

"Government must be better connected to the people it serves and partners who can work with it - especially small businesses, voluntary and community organisations. Having open information and software that can be used across government departments will result in lower licensing costs in government IT, and reduce the cost of lock-in to suppliers and products."

"It is only right that we are encouraging competition and creating a level playing field for all companies to ensure we

Related links

[Francis Maude speech at an event for IT professionals](#)

Related News and Media

[Liam Maxwell engaged by Efficiency and Reform Group](#)

[ICT Strategy Strategic Implementation Plan to deliver savings of over a billion pounds](#)

[New government Chief Information Officer announced](#)

[CloudStore opens for business](#)

[Cabinet Office and Oracle sign deal to save £75 million for taxpayers](#)

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3. [Open Standards Consultation responses](#)
4. [Open Standards Consultation documents](#)
5. [Charitable Incorporated Organisation \(CIO\) – Secondary Legislation before Parliament](#)

This is also global

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Data.gov Goes Global

Posted by Steven VanRoekel, Aneesh Chopra on December 05, 2011 at 09:29 AM EST

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Last week, President Obama's unprecedented efforts to advance open and transparent Government reached an important milestone. As part of a joint effort by the United States and India to build an open government platform, the U.S. team has deposited [open source code](#)—an important benchmark in developing the Open Government Platform that will enable governments around the world to stand up their own open government data sites.

Last week's announcement is part of a broader effort to make government more transparent, participatory, and collaborative. In September, the United States was one of eight founding governments of the [Open Government Partnership](#), a new multilateral initiative that secures concrete commitments from governments to promote transparency, empower citizens, fight corruption, and harness new technologies to strengthen governance. The President also unveiled the [U.S. National Action Plan on Open Government](#), which detailed steps the United States will take to help meet the initiative's goals.

The plan specifically called for an effort under the U.S.-India Strategic Dialogue to produce "Data.gov-in-a-Box"—an open source version of the United States' Data.gov data portal and India's India.gov.in document portal. The U.S. and India are working together to produce an open source version available for implementation by countries globally, encouraging governments around the world to stand up open data sites that promote transparency, improve citizen engagement, and engage application developers in continuously improving these efforts. Technical teams from the U.S. and Indian governments have been working together since August of this year, with a planned launch of the open source product (which is now called the Open Government Platform (OGPL) to reflect its broad scope) in early 2012.

The module -- paired with the software for the Open Government Platform website being developed by India -- will enable governments around the world to launch their own open government sites and increase transparency and accountability. In the meantime, the U.S.-India team will continue to improve and integrate the modules of the Open Government Platform for the planned launch early next year.

Steven VanRoekel is the Federal Chief Information Officer

Aneesh Chopra is the Federal Chief Technology Officer

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Research importance - Increasing software quality

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NASA Open Source Software

NASA conducts research and development in software and software technology as an essential response to the needs of NASA missions. Under the NASA Software Release policy, NASA has several options for the release of NASA developed software technologies. These options now include Open Source software release. This option is under the NASA Open Source Agreement "NOSA".

The motivations for NASA to distribute software codes Open Source are:

- To increase NASA software quality via community peer review

Search
Intelligent Systems Division

GO

 + Freedom of Information Act
+ The President's Management Agenda
+ NASA Privacy Statement, Disclaimer, and Accessibility Certification

 NASA Official: Dave Korsmeyer
Curator: ASANI Solutions

Increasing innovation

Economic impact of FLOSS on innovation and competitiveness of the EU ICT sector

Study on the:
Economic impact of open source software
on innovation and the competitiveness of the
Information and Communication Technologies
(ICT) sector in the EU

Final report

Prepared on November 20, 2006

Lead contractor: UNU-MERIT, the Netherlands
Subcontractors:
Universidad Rey Juan Carlos, Spain
University of Limerick, Ireland
Society for Public Information Spaces, France
Business Innovation Centre of Alto Adige-Südtirol, Italy

Prepared by: Rishab Aiyer Ghosh, MERIT

Disclaimer
*The opinions expressed in this Study are those of the authors and do not necessarily reflect
the views of the European Commission. Contract ENTR/04/112.*

© 2006 MERIT. Prepared on November 20, 2006

1

Internet backbone is powered
by OSS

Since April 1996 Apache has
been the most popular HTTP
server software in use. As of
May 2011 Apache was
estimated to serve 63% of all
websites and 66% of the million
busiest

"May 2011 Web Server Survey". Netcraft. May 17, 2011



One research example- URBAN GROWTH



THE ISSUE

PROBLEM

- Unplanned urban growth problems are much bigger in developing/poor countries
- Mapping is a critical component to help understand and develop solutions for urban growth problems
- Proprietary software tools are very expensive (hence unavailable) for economically poor countries and communities worldwide



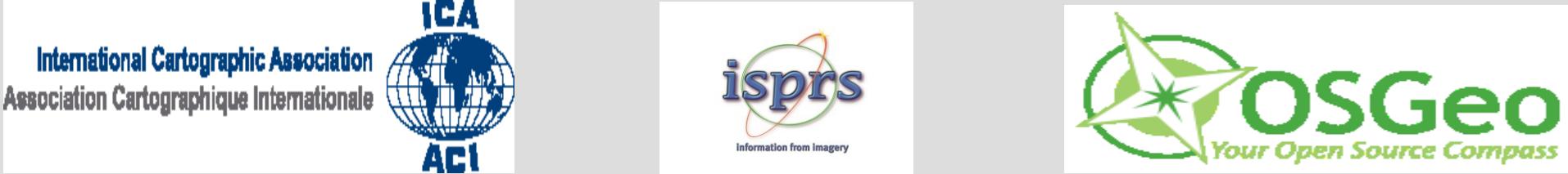
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<http://www.flickr.com/photos/8485582@N07/7365580810>



Dharavi, Mumbai

<http://www.flickr.com/photos/56685562@N00/2340042701>



“Geo for All”

OpenCitySmart - The Open Platform for Smart Cities

Patrick Hogan , Brandt Melick, Maria Antonia Brovelli, Charles Schweik, Jim Miller, Sven Schade, Chris Pettit, Ant Beck, Doreen Boyd, Darren Robinson, Suchith Anand

Why?

The world is shrinking, actually we are getting larger in it, and the cities have to absorb today's exponential increase in population.

World population since the 'second industrial' revolution after 1850s has grown from 1 billion to almost 8 billion today.

In 1950 at a mere 2.5 billion, we were almost evenly distributed between rural and urban. Today, in the developed world, approximately 80% of the population lives in cities.

Why must each city solve these problems alone?

If the cities of the world were to share solutions with each other, they could each focus on different parts of the problem and thereby only bear the burden for a small fraction of the load.

By working together we may come to better appreciate what we share in common as well as experience the joy being able to help each other.

Our proposal

To establish a unifying, open virtual globe, OpenCitySmart, with an API for functionalities.

- To be based on existing open solutions
- Seed this global platform with an initial suite of functionalities that include tools for managing a renewable power grid, wind and solar, based on the success stories of municipalities in northern Italy.
- Include functionalities for managing input of LiDAR data and infrastructure .

This will be in concert with municipalities around the world, including, Springfield, Oregon USA, Como Italy and Melbourne Australia.

We support the 'Open Cities Guiding Principles:

- All material created is made available for all under an Open License
- All material is designed to be extended by others, API-centric, modular componentry.
- All participants aim to reuse, optimize, extend and add new components (in that order :-)

Our intent here is that we have one or a few **core platform(s)** each architected with an open API for functionalities (the menu system). This effort will benefit from friendly competition, with the best features of each 'competing' platform, providing what a SmartCity needs.

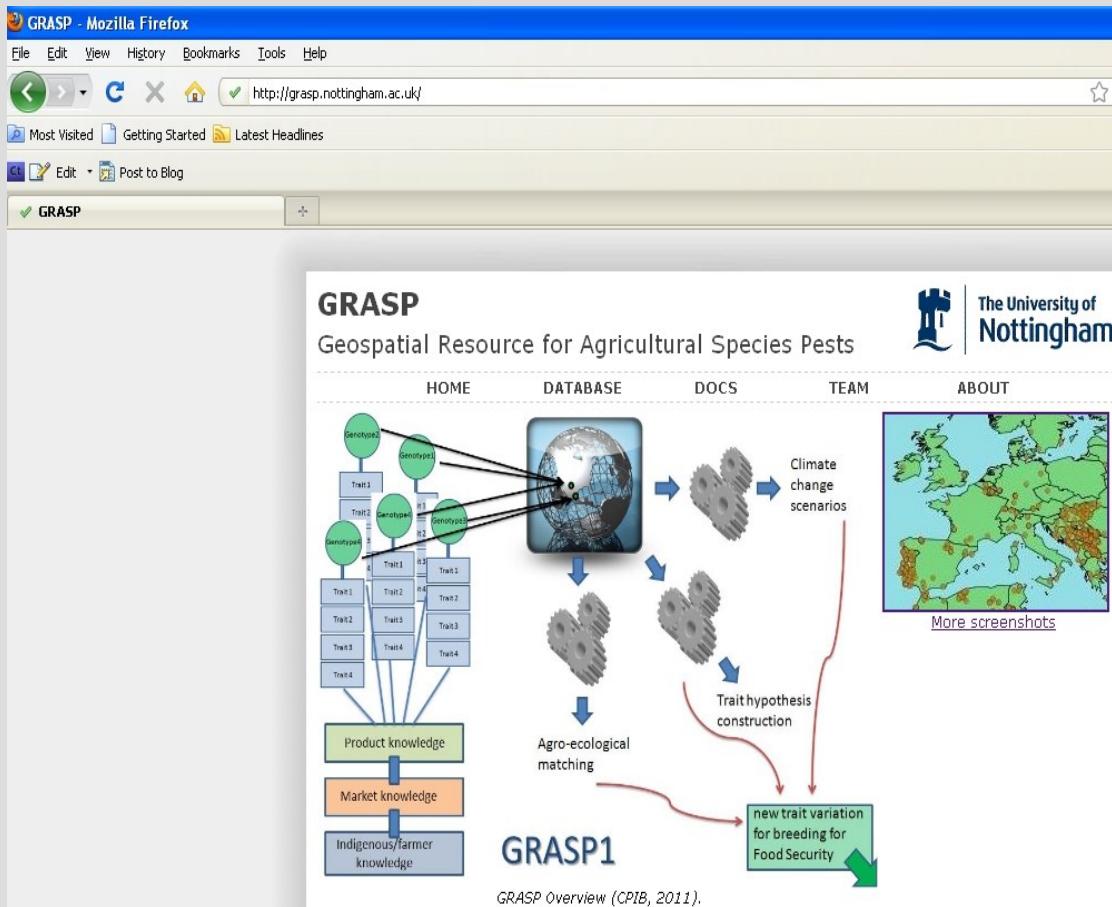
Resources at our disposal to enable OpenCitySmart

- NASA Worldwind Platform
- What if Platform
- Open Source Geospatial Foundation's software tools

More importantly we got an amazing global “Geo for All” team working on our mission

See preview at <https://youtu.be/7NaX9b6F05c>

Example of attracting research funding/sustainability: AgriGIS Research example



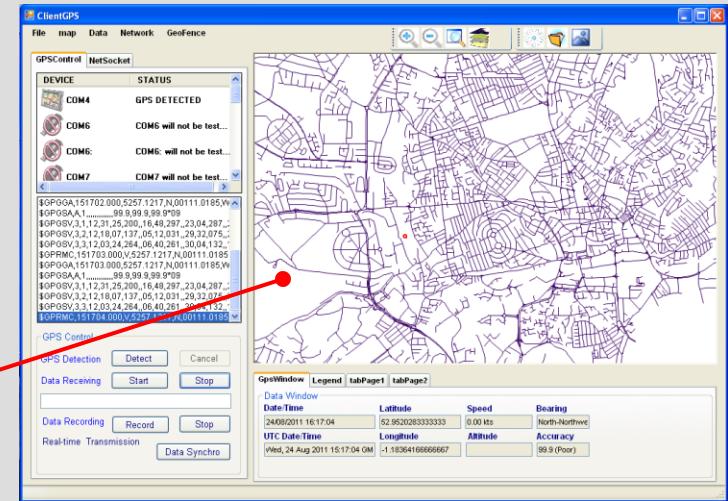
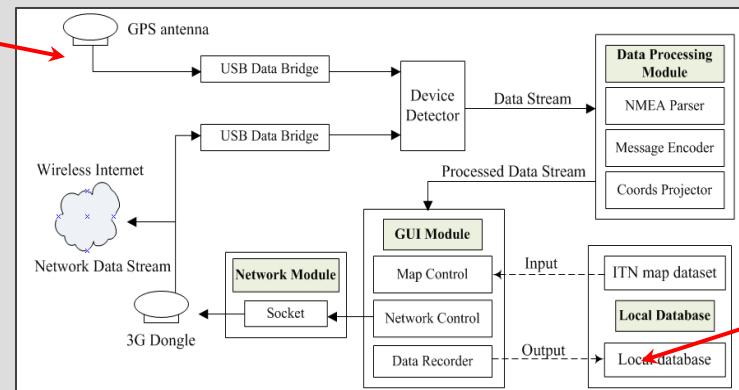
**Fully build on
Open Source
and Open
Standards**

£10k seed funding internal project helped build up a new research theme at UoN with now BBSRC funding (£150k) and 3 PhD studentships + post doc position at CFFRC to build upon the GRASP framework developed in just 1 year

Example: Transportation

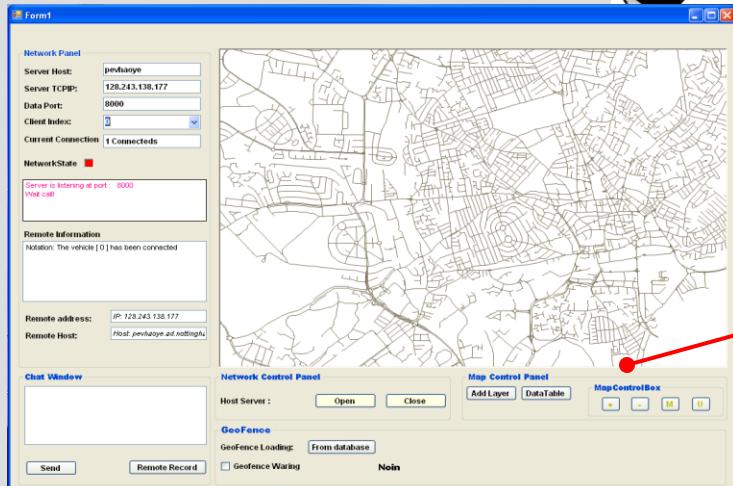


Low-cost GRays2 Receiver

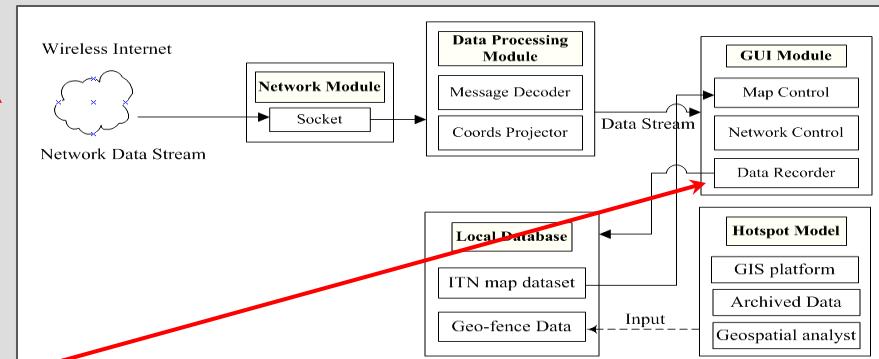


Client Prototype GUI

Huawei 3G Dongle



Server Prototype GUI



Ye H, Meng X, Anand S, Yang L. (2011), "Development of a Traffic Incident Hotspot Data Acquisition System Based on Open-source GIS" ,8th Symposium on Location-based Services, Vienna University of Technology , Austria

Future of Urban Mapping?

How do we combine data from authoritative data sets with feature-rich, informal data, recognizing the variable coverage of informal data while capturing the best of both worlds?



Geographic Ontology Linking and Merging

Map Viewer Line Viewer

Search: AIRPORT_SERVICE_ROAD

Merge: Attribute, Geometry, Go

Fix Inconsistency: Preference%, 1st: 100, 2nd: 80, Fix

Result Message: Explanation and justification here

First Dataset:

THEME: ROAD NETWORK;
FEAOID: 0;
DESCRIPTV: NAMED ROAD;
ROADNAME: AIRPORT SERVICE ROAD;
THEMECOUNT: 1;

Second Dataset:

user: STUPHI;
highway: UNCLASSIFIED;
tags: "CREATED_BY"="POTLATCH
0.10F", "HIGHWAY"="UNCLASSIFIED", "NAME"="AIRPORT SERVICE R";
id: AIRPORT_SERVICE_ROAD;
name: AIRPORT SERVICE ROAD;

This screenshot shows a software interface for geographic ontology linking and merging. It includes two map viewers showing road networks, a search bar for 'AIRPORT_SERVICE_ROAD', and a merge tool with checkboxes for 'Attribute' and 'Geometry'. Below the viewers are two panes labeled 'First Dataset' and 'Second Dataset' displaying detailed metadata and tags for specific road features.



Research based on study funded by Ordnance Survey

Aim - Establish dedicated Open Access journals for Open Geospatial Science

isprs International Journal of Geo-Information

tracked for IMPACT FACTOR

Title / Keyword	Journal	UGI	Volume
Author	Section	-	Issue
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A special issue of *ISPRS International Journal of Geo-Information* (ISSN 2220-9964).

Deadline for manuscript submissions: closed (30 January 2015)

Log on

Open Geospatial Data, Software and Standards

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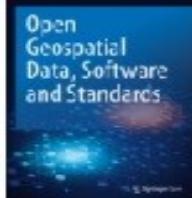
Open Geospatial Data, Software and Standards is accepting submissions; please use the online submission system to [submit your manuscript](#). If you are submitting a manuscript to a particular Special issue, please refer to its specific name in your covering letter. For all enquiries about the journal, please contact editorial@opengeospatialdata.com.

Editorial Board

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Aims & scope



Open Geospatial Data, Software and Standards provides an advanced forum for the science and technology of open data, crowdsourced information, and Sensor Web through the publication of reviews and regular research papers. The journal publishes articles that address issues related, but not limited to, the analysis and processing of open geo-data, standardization and interoperability of open geo data and services, as well as applications based on open geo-data. The journal is also meant to be a space for theories, methods and applications related to crowdsourcing, volunteered geographic information, as well as Sensor Web and related topics.

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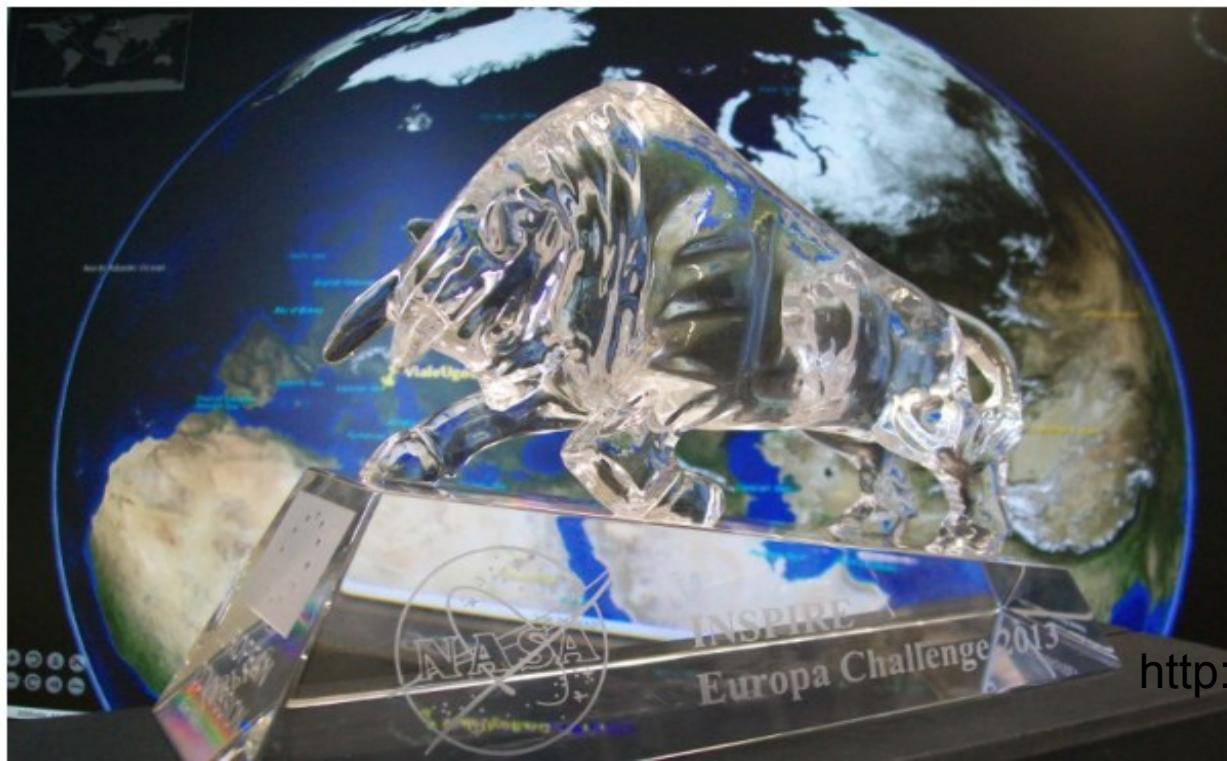
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The Europa Challenge provides the opportunity for Europe's *best and brightest* to deliver sustainable solutions to the European community. And do this in ways that serve local, regional, national or international interests, while also advancing the career opportunities for those who accept the challenge. This is an international challenge open to all on our home planet. See the [2013 Winners](#), China had one of the top teams last year.

The top three teams will take home the crystal Europa Challenge bull! And a few hundred Euros!



Example of an excellent Initiative led by Prof. Maria Brovelli and colleagues

<http://eurochallenge.como.polimi.it>



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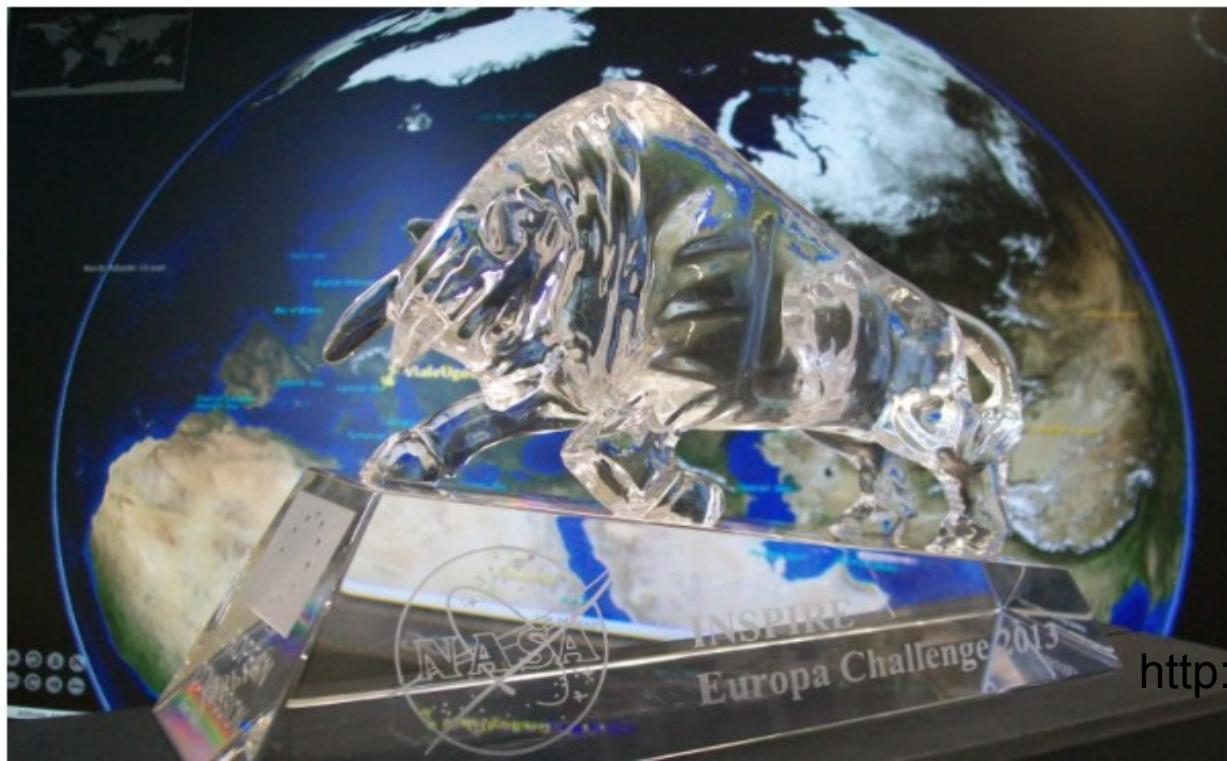
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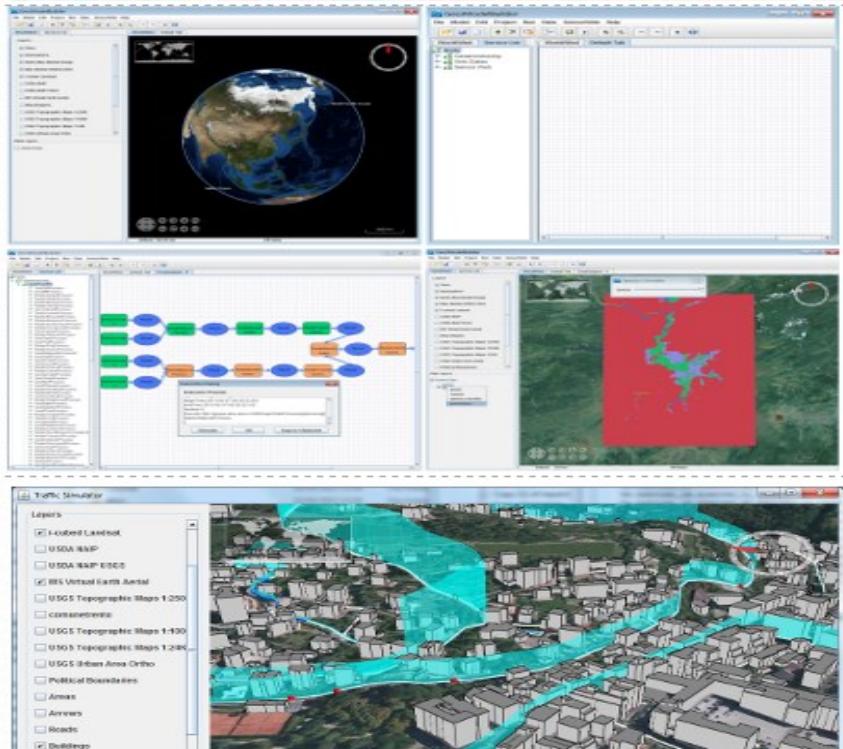
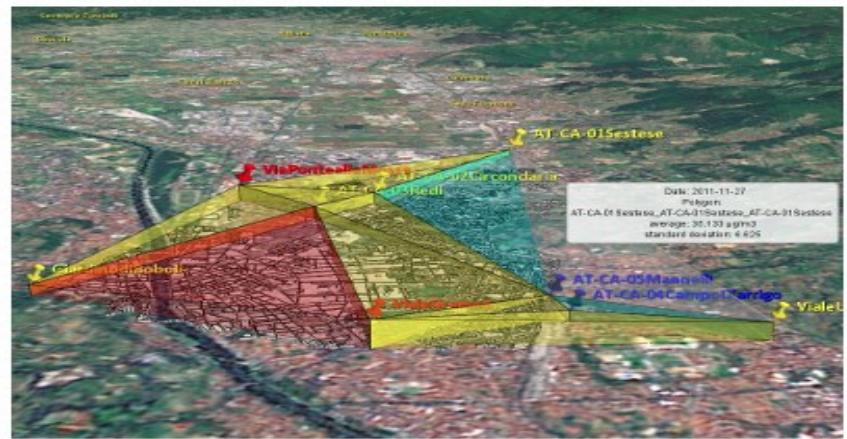
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Air-Quality Data 3D Visualization

www.cirgeo.unipd.it/nasaww

Show a bird's-eye 3D view of air-quality data (PM10) acquired at time intervals from multiple sensors to **reveal air-quality dynamics over space and time**.

Sensors are connected with a Triangular Irregular Network (TIN) to cover the area of interest. Data is represented geometrically and colorized to easily recognize high-to-low values. Areas affected by a potential risk for health are quickly discernible. Users can adjust data acquisition times for dynamic updating.

Environmental Monitoring With GeoJModelBuilder

www.sourceforge.net/projects/geopw

GeoJModelBuilder couples geo-processing Web services and Sensor Web services to support geo-processing modeling and environmental monitoring. The main goal of GeoJModelBuilder is to bring an easy-to-use tool to the geo-scientific community.

The tool allows a user to drag and drop various geospatial services to **visually generate workflows and then to interact with those workflows in a virtual globe environment**. It also allows users to audit trails of workflow executions, check the provenance of data products and support scientific reproducibility.

Urban Traffic Visual Analytics Simulator

www.interactivesystem.collaborate.org

The goal is to develop a highly interactive visual analytics system that helps urban planners, decision makers and traffic analysts simulate the urban scenario related to the urban viability. **Users interact directly via the 3D context**. This ensures intuitive understanding and easy adjustment to any simulated scenario.

The user interacts with the 3D environment through graphical metaphors that considerably reduce the time needed to set the

Why Open Geo Science?

- ◆ helps in empowerment of staff and students
- ◆ capacity building
- ◆ developing creative and open minds in students which is critical for building open innovation
- ◆ contributes to building up Open Knowledge for the benefit of the whole society and for our future generations.

Building an open source, open standards, open data research framework through Open Geo Science



Key advantages

- Scalable
- Interoperability
- Accelerate Innovation
- Low costs
- No proprietary lockin
- Benefits wider community

Represents the individual content creator on the World Wide Web

Thanks to all colleagues in the “Geo for All” initiative

Let us all join to eradicate extreme poverty and enable shared prosperity for all

