### **Conference Programme**

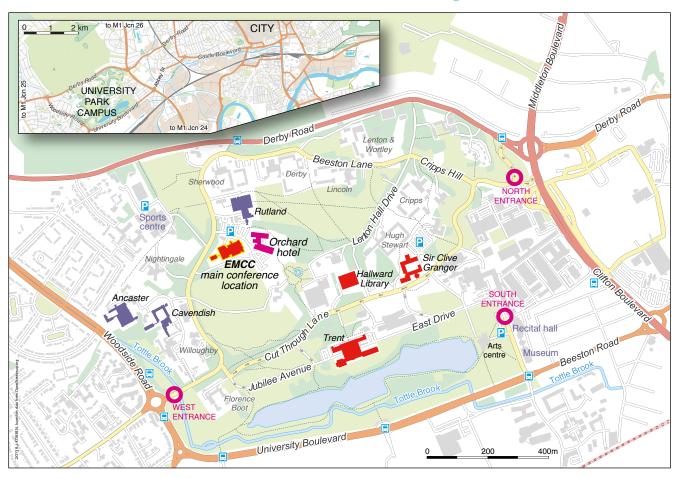


## The Global Conference for Open Source Geospatial Software

The annual gathering of Open Source Geospatial Developers, Users and Leaders

East Midlands Conference Centre Nottingham, 17th to 21st September

### **Conference Centre site map**



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### **Welcome from the Conference Chair**

It is my pleasure to welcome you to Nottingham for FOSS4G 2013. There is so much geo-stuff going on in the UK at the moment that we have renamed this month Maptember, but unquestionably FOSS4G is the highlight!

The theme for this year's conference is "Geo for All" – it was prompted by our discussion about the significance of the word "free" in FOSS4G is it "free" as in beer or "free" as in speech? I have asked all of our keynoters to weave this theme of "Geo for All" into their plenary addresses.

Working in Europe it feels as if Open Source Geo is on the crest of a wave. The European INSPIRE project is probably the most ambitious multi-country Spatial Data Infrastructure ever conceived, and it is largely built on OSGeo technologies. In addition, the UK government's recently published ICT strategy specifically promotes the use of open source software. Whether you are a long term member of the OSGeo community, a newish member (like me), or are here for your first look at open source geo, I am sure that over the next three days you will catch this wave of excitement. Look out for the keynotes and case studies in the programme that highlight the innovative and sometimes life-changing projects that are powered by our OSGeo community.

Planning and delivering this conference over the last 18 months has required an exceptional level of talent and commitment from the Local Organising Committee, I want to acknowledge and applaud them. It would be great if you could go out of your way to meet each of these heroes and tell them how much you appreciate their efforts. Also look out for the volunteers who will be wearing special t-shirts or wristbands, they are giving up some of their conference time to help the event run smoothly.

I am very grateful for the generosity of our sponsors who have made this event affordable and financially viable. Our sponsors are users of OSGeo software, contributors to the projects and providers of services, please take time to visit their booths. I also want to thank the Association for Geographic Information, our event organising partner, without the hard work of their team almost nothing would have happened.



Robin Hood is the mediaeval hero of Nottinghamshire, he allegedly stole from the rich to give to the poor. I think he might have been quite impressed by the FOSS4G community that has gathered here this week.

Enjoy yourselves

Steven Feldman

### **Welcome from the President**

The Open Source Geospatial Foundation, OSGeo, is proud to host you here in Nottingham at the geospatial conference of the year, FOSS4G 2013. OSGeo's mission is to support and promote the collaborative development of open geospatial technologies, and a very successful way to help meet this goal is through these hugely successful Free and Open Source Software for Geospatial, FOSS4G, events.

Attending a FOSS4G event is a unique experience. The fundamentals lie in sharing, learning, socializing, with passionate leaders from all around the world, in a friendly environment that makes you instantly feel like an important member of the community. Community is really what FOSS4G is all about. If this is your first time at a FOSS4G event, introduce yourself, grab a chair in the hallway and join the discussions about a demo, ask questions freely in a hands-on workshop, and most likely you will find other community members here that will share your passion and interest.

Not to be neglected at all, no matter what, is the hard work of the Nottingham local organizing committee. Plans for this event likely began more than twelve months ago, and most will have devoted their last few months solely to this event. They are true FOSS4G Heroes, so give them a pat on the back.

Finally, FOSS4G will foster your growth and magnify your passion and interest for open geospatial technologies, which you should happily diffuse back home, to your local community. Share this passion, this experience, this knowledge, with your local community. Work with your local OSGeo Chapter, or better yet, start one up. Share.

In all likelihood, you will go home with newly established friendships, memories of shared laughs, and a bitter-sweet, more sweet than bitter, feeling of complete exhaustion from having so much fun while "working". This is indeed the true spirit of FOSS4G.



Jeff McKenna

### Welcome from the AGI

The Association for Geographic Information (AGI) has supported the initiative to bring FOSS4G to the UK since it was first discussed and we are delighted to be here with you in Nottingham.

The AGI lead, connect and develop a thriving community of members who use or benefit from geographical information. We champion the value that the intersection of geography and information has for the economy, business and for the individual. Free and Open Source technology is playing an increasingly important role in our community and touches the work that all of us do. It is for this reason that we continue to embrace OSGeo in the UK and internationally and are very pleased to see FOSS4G kicking off as GeoCommunity 2013, our own annual conference, draws to a close.

On behalf of the AGI, I would like to take this opportunity to recognise and congratulate the Local Organising Committee, they have worked tremendously hard over a sustained period to deliver

this event, which I know will be a huge success.

Enjoy this event as well as everything else that Nottingham and the UK have to offer during your stay. We look forward to meeting you and welcoming you to future UK Geo events.



Anne Kemp, AGI Chair



# Welcome from the University of Nottingham

The University of Nottingham is excited and pleased to welcome FOSS4G to the East Midlands Conference Centre on our University Park campus. The University's roots go back to Nottingham's first civic college in 1881, before it moved from the city centre to University Park in 1928. The university is now one of the top tier UK universities, ranked in the top 15 in the UK and top 75 worldwide.

The Nottingham Geospatial Institute (NGI), from which support for FOSS4G comes, was formed in 2011 but builds on a strong heritage in surveying, geomatics, remote sensing and GIS. We have long been supporters of open standards, open source and open data, working in key organisations such as the Open Geospatial Consortium, the International Cartographic Association, OpenStreetMap and OSGeo, as well as being academic representatives on the UK Location Programme, and have run a series of conferences, OSGIS, to promote research and development around open source GIS. FOSS4G is therefore very much the summit of this activity for

NGI and the University. We feel privileged to have been part of the local organisers for this event, and welcome you to the EMCC and the University. We hope that between sessions you have the opportunity to

explore the park and campus, and that whatever your engagement with the conference, you enjoy your time here.



Jeremy Morley
Geospatial Science Theme Leader,
Nottingham Geospatial Institute.

### **Conference Info and Admin**

### Information – Conference Desk

The main Conference Desk will be in the lobby of the main EMCC building (see venue map on back cover). If you need assistance from the conference team at any point during the event this is your main point of contact.

The number for the conference desk is:

#### +44 (0)7747 337126

Any programme changes, information about birds of a feather meetings, excursions, administrative issues and any surprises will be displayed here. Please keep an eye on this during the conference.

### Registration

#### Pre-booked Workshops & Geohack

Registration will be open to workshop delegates on Tuesday and Wednesday from 8.30am – 10am and 1pm – 2pm in the GeoCamp. As the AGI GeoCommunity conference is taking place in the venue during these days, we request that only workshop delegates register during this time.

#### **Main Conference**

Main registration for all other delegates will be at the Conference Desk, in the lobby of the main EMCC Building. This will open on **Wednesday evening from 5pm** until the start of the Ice Breaker event and will open on **Thursday morning from 8.00am** and will be open for those with day passes on **Friday and Saturday from 8.30am**.

Please ensure you have registered before attending any events or sessions. At registration, you will receive your delegate pack and see any late amendments to the programme booklet. An interactive version of the most up-to-date programme will also be on http://2013.foss4g.org/.

In your pack is a lanyard with key information about the conference and your registration badge. Please wear this during the conference and make sure that your name badge is visible, you will not be able to access sessions, events or catering without it.

The Conference Desk is staffed by volunteers in addition to members of the event team; we will work as quickly as we can to assist you but please be patient during busy periods.

### Workshop Booking

Workshops on the official 'workshop days' – Tuesday and Wednesday – were subject to pre-booking before the start of the conference. If there are last-minute spaces available, these will be advertised at the Conference Desk and on the conference website. These spaces will be made available on a first-come, first-served basis, and the standard workshop charge will be payable.

Additional workshops take place throughout the main conference days, these will be booked on a first-come, first-served basis (if you find you can't make a booking, please let us know so that we can make the place available). The sign-up list for each workshop will be available on the day near the Conference Desk. These workshops are free to attend for delegates with a valid conference pass for the relevant day.

### Venue Locations

The conference takes place at the East Midlands Conference Centre (EMCC), on Nottingham University's main campus. Maps showing the main conference locations, the location of the main accommodation blocks and an overview of the city of Nottingham are on the back and front covers of this booklet.

The EMCC is at University Park, Nottingham NG7 2RJ. The car park within the barrier for the EMCC is free for delegates to park. To park outside of this area you need a validated car park ticket, which can be arranged at the main EMCC reception desk.

Within the conference, the main locations are as follows:

- EMCC: Plenaries, Presentations and Ice Breaker
- GeoCamp: Hackathon, Map Gallery, the Gala Night and a space for the duration of the event to relax, network, eat and drink
- Sir Clive Granger Building: Workshops and Presentations
- Hallward Library: Workshops
- Trent Building: Workshops

Signage will help you find these venues. If you are lost, speak to a volunteer or ask at the Conference Desk.

### Catering

Breakfast will be served in your accommodation – either the University Halls of Residence (7.00 –8.30am) or the Orchard Hotel. Please check at the respective location for more details.

On Tuesday and Wednesday lunches for workshop participants will be available from the Sir Clive Granger Building for workshop participants. For hackathon participants lunch will be in the geocamp.

On Thursday to Saturday lunch will be served in the Banqueting Suite and Atrium during the periods marked on the programme. Note that some presentations and workshops will overlap with this period to fit in our packed programme and avoid long queues for food.

Dinner will be provided (if you have booked) at the Gala Night, Ice Breaker and Closing Party. On other evenings, you will need to organise your own evening meal.

Details of a selection of Nottingham restaurants will be available at the Conference Desk, but you are advised to make advanced bookings to guarantee a table. This particularly applies to Friday and Saturday night.

Snacks and drinks will be also be available in the Atrium and Banqueting suite and other locations during Thursday to Saturday. There is also a cafe in the Portland Building and at other sites on campus, but these are not included in the cost of the conference package.

### Recycling

FOSS4G 2013 is aiming to be as environmentally friendly as possible. Recycling facilities will be available throughout the site, so please make an effort to use them and help us keep the carbon footprint as low as possible.

### Photography

Photographs and video footage will be taken throughout the event for both promotional and knowledge dissemination purposes. If you do not wish your photograph to be used for these purposes, please speak to a member of the LOC.

### Internet Access

Internet access will be available throughout the conference site (including the GeoCamp), though it

may not be available in all accommodation. Access details will be displayed at the Conference Desk. In using the conference Internet, you will be required to agree to the University of Nottingham terms and conditions for internet use.

Although the bandwidth should be adequate, as with all conferences, there will be periods of high demand, so please try to avoid big downloads if you can and use only one device at a time. If you are a UK resident with a data plan it would help everyone else if you could use that plan.

### Code of Conduct

The FOSS4G LOC are dedicated to providing an inclusive, non-confrontational conference experience for everyone, regardless of gender, sexual orientation, disability, physical appearance, race, or religion.

Sexual, racial or offensive language and imagery is not appropriate in any aspect of this conference, including talks, Twitter and other online media.

Conference participants violating these rules may be sanctioned or expelled from the conference without a refund at the discretion of the conference organisers.

If you have any concerns relating to the code of conduct, contact a member of the LOC.

### Accommodation

The main accommodation for the conference will be in the University of Nottingham halls of residence and the Orchard Hotel, both on the University Park campus, and within easy walking distance of the EMCC.

Details of check-in and –out arrangement and catering arrangements for each location are listed below.

- Orchard Hotel: Check in after 2pm, check out before 11am. Open 24 hours, breakfast in the hotel.
- Halls of Residence: Check in after 3pm, check out before 10am. There is porter cover until 12am, and thereafter a number (shown on the main doors) is provided to call for access. Breakfast in the refectory from 7.00 – 8.30am.

Information about facilities to leave luggage will be available from the Conference Desk. The FOSS4G LOC and EMCC cannot take responsibility for any items that are left in cloakrooms unattended, use of this facility is at your own risk, please do not leave valuables.

### Safety and Security

We want everyone to have a safe and successful conference, so please bear in mind the following:

- When at the conference, please wear your lanyard at all times – delegates without a valid lanyard will not be able to attend sessions, events or meals.
- Ensure that you understand the evacuation procedure from your accommodation and the conference venue.
- Don't leave bags, phones, laptops or other equipment unattended, either in the conference centre or in town – beware of opportunistic thieves.

- Only use official public transport or licensed taxis (they will have a registration number clearly displayed).
- If there is a first aid emergency, please contact the EMCC front desk or the servator/ reception desk in your accommodation.
- The emergency services number in the UK is 999.

# Google is proud to sponsor FOSS4G 2013!



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### FOSS4G 2013 Sponsors

We are grateful for the support of all our sponsors. We encourage you to visit the exhibition during the conference and speak to all of our exhibitors in person.

Further details about our sponsors are included in the advertisements in this brochure.

























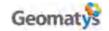














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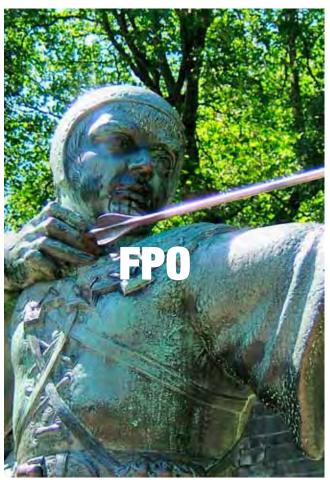
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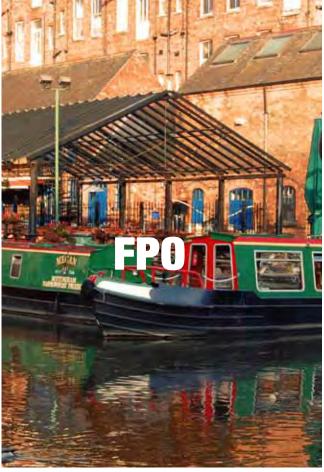
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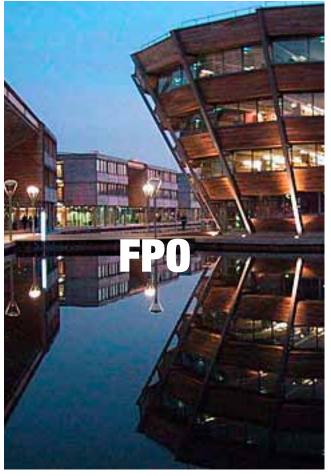
Vizzuality

Walkinfo











# Organising Committee, Volunteers and Thanks

### Local Organising Committee



The conference has been organised by the FOSS4G 2013 Local Organising Committee (LOC). They have been working behind the scenes for many months and you will see them darting

around during the event in green T-shirts keeping the conference running smoothly. Try and intercept them for a chat – this is most likely to be successful if accompanied by a drink!



Steven Feldman, Conference Chair (@StevenFeldman) has been working in the geobusiness for the last 14 years, initially with whereonearth.com, subsequently as MD of GDC and latterly MD of MapInfo UK and head of their

EMEA product and industry strategy. He now works as a non-executive director, a strategic consultant and mentor to technology startups. He is currently chairman of geo.me Solutions, and a board advisor to Astun Technology and OpenCage Data. He is a Special Lecturer at the School of Geography at the University of Nottingham, where he initiated the OpenStreetMap GB quality enhancement project and also advises the Open Source humanitarian project Taarifa. Steven is passionate about geography, Open things, politics and Arsenal football club.



Jo Cook, Deputy Conference Chair (@archaeogeek) is the founder of the local chapter of OSGeo (OSGeo:UK) and has wanted to bring FOSS4G to the UK since she went to her first one in 2006. Three FOSS4Gs later.

she is even more committed to bringing the tribes to her home country. In her day job she has been advocating open source use since 2006, previously in the archaeology sector, and now as part of her role as a geospatial consultant for Astun Technology.



Jeremy Morley, Deputy
Conference Chair (@jeremy\_
morley) is Theme Leader for
Geospatial Science at the
Nottingham Geospatial Institute.
He has worked in the academic
GIS sector since the mid-90s.

Jeremy has promoted and researched Open GIS standards (through the OGC TC since 2000), data (UK Location Programme User Group) and software (hosted the "EOGEO" workshops, predecessors to FOSS4G, in 2000 & 2004). He chaired the AGI GeoCommunity conference in 2011 and 2012.



Suchith Anand is leading open source research at the Nottingham Geospatial Institute, and is the chair of the ICA Commission on Open Source Geospatial Technologies. He is one of the founding members of the Open

Source GIS Summer School initiative, the Geospatial Open Source, Open Standards, Open Data e-learning initiative, and the founder and co-chair of the Open Source GIS Conference Series. He is in the process of establishing Open Source Geospatial Labs/ Research Centres in key universities worldwide as part of the Open Source Geospatial Foundation – ICA MoU.



Prof. Dr. Franz-Josef Behr is a full time professor of spatial information processing at Stuttgart University of Applied Sciences, where he teaches software development, Internet Technology and Internet GIS. He has published

two GIS textbooks, more than 50 scientific papers, presented at international conferences, and conducted workshops and organised scientific conferences in many locations around the world. He is an active member of the German Organisation for Standardization and supporter of Open Source and Open Data.



lan Edwards (@isedwards) is a senior software engineer at the UK Met Office and is chair of OSGeo:UK. His GIS career has spanned academia, business and government; including research positions at the universities of

Cambridge and Exeter, director of a GIS company and more recently as a civil servant developing open source software solutions for the Met Office. Ian is an honorary fellow of the University of Exeter, and continues to be a regular speaker at the University of Cambridge. He is also a Fellow of the Royal Geographical Society.

Claire Gilmour is the Events
Manager at the Association for
Geographic Information (AGI). She
is responsible for the logistical
management of the Events
programme including the annual
conference – AGI GeoCommunity

- the main independent GI event in the UK, and for third party events including the Public Sector Mapping Agreement one day events, INSPIRE one day events and the ISO/TC 211 workshops when they were held in the UK.

> lan Holt (@lanHolt) is the Developer Programme Manager at Ordnance Survey, where he is responsible for encouraging and stimulating the use of OS OpenData. He is also a member of the GeoVation team, actively

promoting innovation through the use of geography. He has over 20 years experience in the geospatial industry and has spent a good part of his career developing enterprise geospatial solutions for the utilities, communications, and public organisations. Ian has recently helped run a series of master classes to highlight the benefits of open source and open data.

Rollo Home (@rollohome) is the 3D product lead for Ordnance Survey. He cut his teeth as a geo-consultant working for various international engineering consultancies (relying far too heavily on his trusty "GIS-on-

a-Stick") and then a 3D modelling vendor. He (occasionally) writes about (at #SpatialNeeds) and

promotes (through the AGI, where he is a Council Member and Director) the use of geographic information. He also manages the #W3G conference series.

Mark Iliffe (@markiliffe) is a
PhD student at the Nottingham
Geospatial Institute and a
geospatial consultant for the Global
ICT sector of the World Bank.
He has surveyed and worked in

developing nations across the world, and is also the chief architect of Taarifa, an Open Source public services reporting platform.



Barend Köbben is a Cartographer, and works at ITC, part of the University of Twente. His teaching includes Cartographic Theory, Web Cartography and courses and workshops in Open Source GIS and Web Mapping. His main

research interest is automated mapping in a services environment.



Abigail Page (@abi\_csgn) is a GIS and Data Manager, and exercises a leading role in supporting the creation of the Central Scotland Green Network, one of the most ambitious green initiatives in Europe. She actively promotes the

use of GI for community, education and in her own field and is a Council Member and Director of the AGI.



Addy Pope (@go\_geo/@Addy\_Pope) is a member of the Research and Geodata team at EDINA, where he promotes the use of geospatial technology in higher and further education in the UK through

services such as GoGeo and ShareGeo. He has over 10 years experience working as a GIS analyst in both the private and public sectors, but still likes to think he is a glaciologist. Addy maintains the GoGeo blog.

### Local Organising Committee (continued)



**Barry Rowlingson** (@geospacedman) is a Senior Research Associate in Spatial Epidemiology at Lancaster University. He specialises in opensource packages for the R statistics system and plugins for Quantum

GIS with application to tropical disease mapping.



### **Antony Scott (@antscott)** works at Sustain Ltd, using open source GIS for domestic energy

management and renewable energy feasibility. He is active in OSGeo:UK, and with MapAction, a UK-based NGO providing

emergency mapping in humanitarian disasters.



### Matt Walker (@ walkermatt)

is a geospatial consultant / developer at Astun Technology, implementing solutions on open software. He is a day-today user of and contributor to open software, and has hosted

workshops, presented at and organised various events.

### Volunteers



Peter Brosseit

Luciene Delazari

Pieter Kempeneers

Thomas Finnie

Henna Chou

Alex Coley

Gary Gale

Aileen Heal

Zhi Huang

Phil James

Stu Lester

Erik Meerburg

Mark Percival

Pekka Sarkola

Angharad Stone

Christian Willmes

Mark Sabin

Marco Minghini

Andreas Neumann

Assisting our LOC, the volunteer team are making sure that the event happens and we couldn't do it without them:

Till Adams Tsitsi Bangira

Just van den Broecke Tom Buckley John Bryant Antony Chrysochoou Maria del Pilar Reyes Careaga Elisabet Chris Foote

Christine Gangl Heather Hillers David Hunt Karl-MagnusJönsson Johannes Küpper Roy Marsh Peter Meijer Jonathan Moules Brian Norman Amir Pourabdollah Roberto Santos Dinesh Sharma Matt Travis

Helene Augu John Birkett Jain Burnell Steven Campbell Tamara Colby

Kenneth Field Sam Franklin Robert Graham Mats Högström Jermiane Hutchinson Ilona Kemeling Jakob Lagerstedt Shannon McCann Simon Miles Arfanara Najnin Dr Ropo Ogundipe Cristina Rosales Jorge Sanz Giuseppe Sollazzo Paul van Genuchten

### Acknowledgements

The LOC would like to acknowledge the enormous amount of help and support from various organisations and individuals in organising this conference. In particular we would like to thank:

- The conference sponsors, who have made the event possible
- The UK Met Office, for organising the hackathon
- · The University of Nottingham, for use of its facilities and the contribution of its staff
- The OSGeo board, for their support and guidance
- The Association for Geographic Information (AGI), for co-locating the conference with the annual GeoCommunity conference, and providing staff time in organising the conference, and moral support throughout the process
- Peter Batty, for providing timely and relevant advice to the LOC
- All of our volunteers who are helping during the conference
- The community of contributors to OSGeo
- You, the delegates without whom there would be no FOSS4G.

### **Conference Location**

### Nottingham

Nottingham is centrally situated in the heart of green England, surrounded by beautiful countryside and a wealth of history, easily accessible via rail (at 1 hour 45 mins from London) and air.

The city itself is renowned as a cultural centre, intertwined with the legendary figures of Robin Hood and his Merry Men and Maid Marian. The literary works of DH Lawrence and Lord Byron hark from Nottingham and its surrounding area, with Ada Lovelace, the first computer programmer, among notable former residents. Being surrounded by rural England, the attractions of Sherwood Forest, the Peak District and Skegness are close by.

Delegates may also wish to visit the market towns and villages of Newark and Melton Mowbray, the latter famous for its local delicacies – pork pies and Stilton cheese. Various of Lord Byron's homes in the area can be visited, foremost of which is Newstead Abbey, owned by Nottingham City and located 12 miles north of the city.

Bus: University Park and Jubilee Campus are both on major bus routes. For timetables visit **www.trentbuses.co.uk** or phone **01773 712265** or visit **www.nctx.co.uk** or phone **0115 9506070** for further information.





## **OS OpenData**<sup>™</sup>

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### Or see us at:

W16: QGIS, OpenData & Cartographic Design; Create a Robin Hood tourist map of Nottingham

Session 14: The business case for Open Standards

Session 16: Introduction to Linked Data

Session 16: Rapid Assembly of Geo-centred Linked Data

Session 53: Using NOSQL and HTML5 libraries to rapidly generate interactive web visualisations of high-volume spatiotemporal data

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### **Programme**

### Overview

Date	Early	Daytime	Later
Tuesday 17		Pre-booked Workshops & GeoHack	
V		Pre-booked Workshops & GeoHack	IceBreaker
Thursday 19		Main Programme & Free Workshops (pm)	Gala Event
Friday 20	Birds of a Feather	Main Programme & Free Workshops & Unconference (pm)	Optional Excursion
Saturday 20	Birds of a Feather	Main Programme, Free Workshops (am) & OSGeo AGM	Closing Party
Sunday 21		Code Sprint	

### Keynoters



### Edward Anderson – Open Development Technology Alliance, World Bank

Edward coordinates the World Bank's ICT Knowledge platform's programme to use digital

engagement tools for building greater public transparency and civic participation, as well as more accountability around public services. This includes engaging with technology communities in Tanzania and Kenya, where Africa's open data movement has taken root. Anderson's original training is as an aerospace engineer. In 2004 Anderson launched a technology start-up for early warning systems in East Africa - focussed on a proof of concept for new diagnostic tools in malaria epidemic surveillance. After supporting the 2006 Development Marketplace for Health Innovations, Anderson worked in disaster risk operations for the Inter-American Development Bank and World Bank, building new partnerships with technical communities including NASA, Google, Random Hacks of Kindness, and CrisisCommons. Throughout his career, Anderson has sought to find ways to harness science and technology for development.



### Kate Chapman – Acting Director Humanitarian OpenStreetMap Team (HOT)

HOT is a non-governmental organization dedicated to helping support communities, governments

and humanitarian responders in their utilization of OpenStreetMap in crisis response and contingency planning. As Acting Executive Director, Kate both oversees the overall goals of the organization, and participates in its programs. Currently, Kate is based in Jakarta, Indonesia, leading a multi-year program to collect critical infrastructure information, which proved especially useful to the municipal government in the aftermath of the 2013 Jakarta floods. Additionally, the Indonesia project inspired an OpenStreetMap mapping competition and assisted community facilitators in upgrading from hand-drawn to more accurate digital maps. Prior to her work at HOT, Kate was involved in web-mapping applications engineering, including GeoCommons and iMapData.



### Jason Davies - D3.js

Jason Davies is a freelance programmer based in London. He is a co-author of D3.js (http://d3js.org), a popular opensource visualization library. He

implemented several geographic algorithms for D3 s geographic subsystem, as well as countless map projections, which you can explore at http://www.jasondavies.com/maps/. Jason graduated with a B.A. degree in Computer Science from the University of Cambridge in 2005.



### Emer Coleman – Consultant to Connected Digital Economy Catapult Technology Strategy Board

Emer is "mostly about change" applied against her background

of Innovation, Open Data, Journalism, Social Media, Arts and Culture, Public Sector Policy and Organisational Change, working at the local, regional and central government levels. Most recently this was as Deputy Director for Digital Engagement in the Government Digital Service (Cabinet Office), and prior to that as the architect of The London Datastore (http://data.london.gov.uk/). She is also someone who works on a number of projects at once: thus she is the founder of DSRPTN (http://disruptionltd.com/) a consultancy specialising in leadership and change and is also Business Development Director with Placr (http://placr.co.uk/) a start-up powering innovation and change in transport. Emer was named in Wired Magazine's Top 100 Digital Power Influencers List 2011 and served as a judge for the Rockerfeller Foundation 2012 Innovation Challenge Decoding Data, as well as a speaker at the Code for America Summit 2012 in San Francisco (http://www.youtube. com/watch?v=2sMlsRuJoyM)



# Ben Hennig – Worldmapper Project, University of Sheffield

Benjamin Hennig is a geographer educated at the Universities of Cologne and Bonn and the Alfred

Wegener Institute for Polar and Marine Research Bremerhaven. He joined the Social and Spatial Inequalities Research Group at the University of Sheffield, where he became part of the Worldmapper

project team, which is working on mapping the social dimensions of the world, and the Institute of Public Policy Research North named Ben as one of the 2011 Northern Lights, recognising the brightest and most talented people in Northern England. For his Worldmapper research he also received the prestigious German Study Award 2012 (Deutscher Studienpreis). He is now a Senior Research Fellow at the School of Geography and the Environment at the University of Oxford, where he works on understanding social inequalities, humanity's impact on Earth, global sustainability and new concepts for the visualisation of these issues. Some of the maps and cartograms Ben has created are on display (and free for all to use) on his website www. viewsoftheworld.net, which provides further insights into his work.



### Ian James – Chief Architect, Ordnance Survey (OS)

lan is responsible for the overall systems architecture at OS, and ensuring that new developments evolve in a joined-up way. He

has 20 years' experience in information systems, first cutting his teeth in applications development, working on a wide variety of geospatial production systems. Since then he has worked as a consultant across all parts of OS business. He has specialised in Application and Enterprise Architecture, providing technical leadership on significant OS systems reengineering programmes, as well as direction and consultancy to many other significant OS IT projects. He has recently been Technical Architect for the UK Location Programme.



### Paul Ramsey – Co-founder PostGIS

Paul is a Geospatial Architect at OpenGeo. He has been working with geospatial software for over a decade: consulting to government

and industry; building a geospatial software company; and programming on open source. He founded the PostGIS spatial database project in 2001, and is currently an active developer and member of the project steering committee. In 2008, Paul received the Sol Katz Award for achievement in open source geospatial software. Paul speaks and teaches regularly at conferences around the world.



### Chris Tucker – MapStory.org

Chris is the creator of MapStory (@mapstory), a new dimension to the global data commons that empowers a global user

community to organize knowledge about the world spatially and temporally. He manages Yale House Ventures, a portfolio of technology companies and social ventures – of which the MapStory Foundation is one. Tucker was the President and CEO of a hightechnology firm in the area of geospatial intelligence that he took from startup to acquisition by ERDAS. Prior to his time in industry, Tucker was the founding Chief Strategic Officer of In-Q-Tel, the CIA's Venture Fund. Before that, he served as Special Advisor to the Executive Vice Provost of Columbia. Tucker serves on a variety of corporate, non-profit and government Boards including the US Geospatial intelligence Foundation, the Open Geospatial Consortium, Open Plans, OpenGeo, the National Geospatial Advisory Committee, and the Defense Science Board Intelligence Task Force.



### Nathan Woodrow – QGIS project

Nathan Woodrow is a Technical Consultant and QGIS Specialist at Digital Mapping Solutions (DMS) Australia. He has been an active

developer and member of the QGIS project for the last three years. Nathan maintains a QGIS blog (http://nathanw.net) which showcases some of the upcoming features in QGIS, as well as tips and tricks for developers and users. Previous to moving into the consultancy space Nathan worked as a GIS officer in local government for seven years. While in local government Nathan won an award at the Queensland Planning Institute

of Australia state planning awards in 2010 for a bushfire mapping project completed using QGIS and GRASS GIS.

### Presentation Timetable for Thursday, 19 September 2013

Time	Auditorium	Banqueting Suite	EMCC: Room 3	EMCC: Room 1	
10:00 – 11:30	Welcome and Introduction	: Conference Chair McKenna (OSGeo President)	EIWCC: ROOM 3	EMCC: Room 1	
11:30 – 12:00	Break				
12:00 – 12:30	<b>1.1</b> All The New Cool Stuff In QGIS 2.0 Nathan Woodrow	2.1 A Toe In The Water  – Using Open Source Software To Support Catchment Management Planning Michelle Walker	3.1 A Reusable INSPIRE Reference Platform: Supporting Open Source Developments For INSPIRE Implementation And Reuse Piergiorgio Cipriano	<b>4.1</b> Mapping For Rights Georges Thierry Handja	
12:30 – 13:00	<b>1.2</b> QGIS As A Platform Vincent Picavet N	2.2 User-centered Design For map.geo.admin.ch, Or How To Create A Usable Geoportal Cédric Moullet	<b>3.1</b> Create And Use INSPIRE Harmonised Geodata With HALE Silvia Franceschi	<b>4.1</b> Realization Of A Web-based Fire Danger Forecasting System For Mediterranean Landscapes <i>Michael Nolde</i>	
13:00 – 13:30			<b>3.1</b> Creating A Web Atlas In An SDI Environment Using The D3 <i>Library Barend Köbben</i>	<b>4.1</b> Wide Area Alerting And Notification System For Wildfires (and Other Nasties) <i>Graeme McFerren</i>	
13:30 – 14:00	Lunch				
14:00 – 14:30			12.1 Building A Research Data Management Infrastructure Using Open Source Software Christian Willmes	<b>13.1</b> Building Catastrophe Models With Open Data And Open Software <i>Chris</i> <i>Ewing</i>	
14:30 – 15:00	<b>10.1</b> MOLUSCE – An Open Source Land Use Change Analyst. <i>Matteo Gismondi</i>	11.1 Disconnected Geospatial Mobile & "Open Source" 5 Rules To Success? Pascal Coulon	12.2 Delivering High Performance Spatial Data Infrastructures Using FOSS4G Components Mark Bishop	<b>13.2</b> Epidemiology With An Open Source WebGIS Platform <i>Claudia Dolci</i>	
15:00 – 15:30	<b>10.2</b> QGIS In The Cloud Marco Hugentobler	<b>11.2</b> Mobile Development With OpenLayers, Sencha Touch and PhoneGap. <i>Bart</i> van den Eijnden	12.3 MapMint: An Innovative SDI Authoring Platform Based On FOSS4G Nicolas Bozon	13.3 Integrating Collaborative Data Collection And Versioning Into Open Source Tools For Humanitarian Assistance/Disaster Relief. David Askov	
15:30 – 16:00	10.3 QGIS Server, QGIS Web Client And QGIS Cloud Andreas Neumann N	11.3 Web-based Participatory GIS With Data Collection In The Field: A Prototype Architecture Marco Minghini	12.4 Using CKAN As A Catalog For Geospatial Data: Building The Next Generation Of geo.data. gov Adrià Mercader	13.4 Taarifa: Improving Public Service Provision In The Developing World Through A Crowd-sourced Location Based Reporting Application Mark Iliffe	
16:00 – 16:30	Break				
16:30 – 18:00	Afternoon wrap-up Keynotes: Jason Davies (D3.js), Ben Hennig (Worldmapper Project)				

N = Suitable for Newbies

### Remember there are also Free Workshops running today, see page 49

EMCC: Room 2	EMCC: Room 4	Sir Clive Granger A39	Sir Clive Granger A41	Sir Clive Granger A31			
<b>5.1</b> An Introduction To Open Source Geospatial <i>Arnulf Christl</i> <b>N</b>	<b>6.1</b> ODVIS.AT - Visualization Of Austrian Open Government Data <i>Marius Schebella</i>	<b>7.1</b> Big Data In Standardization: Can This Fly? <i>Peter Baumann</i>	<b>8.1</b> pgRouting For Dummies <i>Julien-Samuel Lacroix</i> <b>N</b>	<b>9.1</b> Boost.Geometry, Introduction And Examples Barend Gehrels <b>N</b>			
<b>5.2</b> Open Data For Real <i>Arnulf Christl</i> N	<b>6.2</b> OpenPOIs: An Open Source, Open Data Index To POIs <i>Raj Singh</i>	<b>7.2</b> STOQS: The Spatial Temporal Oceanographic Query System <i>Mike McCann</i>	8.2 Subsidized School Transport For The Shortest Way To School <i>Oliver</i> May N	<b>9.2</b> Bytecode Unification Of Geospatial Computable Models <i>Jan Kolar</i>			
<b>5.3</b> Painless Loading Of National Open Data Sources <i>John Birkett</i>	6.3 An Open Source Analysis Toolbox For Street Network Comparison: How OSM Compares To The Official Austrian Reference Graph Anita Graser						
14.1 Doing Business With	15.1 MapCollaborator –	l					
FOSS Dirk Frigne N	Shared Data Made Easy Robert Graham						
<b>14.2</b> Mapping Open Data With Open Source Software <i>Nicolas Bozon</i>	15.2 OSM-GB: Using Open Source Geospatial Tools To Create OSM Web Services For Great Britain Amir Pourabdollah	<b>16.1</b> Gestural Interaction With Spatiotemporal Linked Open Data <i>Thomas Bartoschek</i>	17.1 Linear Referencing And Dynamic Segmentation For Modelling (linear) Assets: An Application For A Road Network. Andrés Maneiro	<b>18.1</b> GDAL/OGR Project Status <i>Frank Warmerdam</i>			
<b>14.3</b> The Met Office Open Data Journey <i>Clare</i> <i>Hubbard</i>	<b>15.3</b> Things To Do With OpenStreetMap <i>Gemma</i> Boix Xamani N	<b>16.2</b> Introduction To Location And Linked Data <i>John Goodwin</i>	17.2 MapRoad Pavement Management System - A Cross Platform GIS Roads Management Toolkit Seth Girvin N	<b>18.2</b> Geographic Scripting In uDig: Halfway Between Developer And User <i>Andrea</i> <i>Antonello</i>			
<b>14.4</b> The Business Case For Open Standards <i>Peter</i> <i>Controneo</i> N	15.4 Virtual Coast Guard - An Open And Crowd- sourced GIS Portal For Stewardship Of India's Coast Alpesh Gajbe	16.3 The RAGLD (Rapid Assembly Of Geo-centred Linked Data) Framework John Goodwin	<b>17.3</b> Shortest Path Search For Real Road Networks With pgRouting <i>Hal Seki</i>	<b>18.3</b> Spot On Geomajas – A General Introduction <i>Frank Maes</i> N			

### Presentation Timetable for Friday, 20 September 2013

resentation infetable for may, 20 September 2013					
Time	Auditorium	Banqueting Suite	EMCC: Room 3	EMCC: Room 1	
9:00 – 9:30	19.1 FOSS4G In AWS: Choosing, Deploying And Tuning Open Source Components In AWS Mohamed Sayed	20.1 GeoServer On Steroids Simone Giannecchini N	<b>21.1</b> Deegree: Turn-key Solution For Interoperable INSPIRE Download Services <i>Markus Schneider</i>	<b>22.1</b> Choosing The Right Data Store <i>Andrew Ross</i>	
9:30 – 10:00  19.2 The Geodata Agency's Data Distribution Platform Morten Lindegaard		20.2 GeoServer, An Introduction For Beginners Alessio Fabiani N	21.2 Spatial Data Infrastructure Of Bolivia's Plurinational State: A Free And Democratic SDI Raul Fernando Molina Rodriguez	<b>22.2</b> GIS Data Security Applied <i>Joachim Van der</i> <i>Auwera</i>	
10:00 - 10:30	Break				
10:30 - 11:30	<b>Keynotes:</b> Edward Anderso Kate Chapman (HOT)	n (World Bank)			
11:30 – 12:00	28.1 Data-driven Report Writing With R And QGIS Barry Rowlingson	29.1 Advanced GeoServer Security With GeoFence Mauro Bartolomeoli	<b>30.1</b> A New Zealand Case Study: Open Source, Open Standards, Open Data Brent <i>Alexander Wood</i>	<b>31.1</b> Cartaro - The Geospatial CMS <i>Uli Müller</i>	
12:00 – 12:30	<b>28.2</b> LizMap : Easy QGIS Maps Publication On The Web <i>René-Luc Dhont</i> <b>N</b>	<b>29.2</b> State Of GeoServer Andrea Aime	<b>30.2</b> Deploying A Open Source Web-GIS Within Warwickshire County Council <i>Jonathan Moules</i>	<b>31.2</b> CartoDB 2.1 Javier de la Torre	
12:30 – 13:00			<b>30.3</b> Why Open Source GIS Is A Viable Option For The Korean National GIS Program Sanghee Shin		
13:00 – 13:15		·			
13:30 – 14:00			<b>39.1</b> Farm Maps Online: An Open Source Success In Norway <i>Lars Aksel</i> <i>Opsahl</i>	<b>40.1</b> Advanced Cartographic Map Rendering In GeoServer Andrea Aime	
14:00 – 14:30	<b>37.1</b> Esri: Going Open With GitHub <i>Allan Laframboise</i> N	<b>38.1</b> A Future Perspective On The Sensor Web <i>Anton Bakker</i>	<b>39.2</b> FOSS4G In Largescale Projects <i>Marko Turkovic</i>	<b>40.2</b> GeoCat Bridge - Publish From ArcGIS Desktop Into FOSS4G <i>Jeroen Ticheler</i>	
14:30 – 15:00	<b>37.2</b> Technological Innovation With Open Source <i>Manuel Haro Márquez</i>	Innovation With Open Source Manuel Haro Márquez  Data From The Sensor Web Simon Jirka		<b>40.3</b> Processing Data In GeoServer With WPS And SQL Views Andrea Aime	
15:00 – 15:30	<b>37.3</b> The Importance Of Open Source Geospatial Labs In Widening Geospatial Education Worldwide Suchith Anand	38.3 istSOS: A Comprehensive User Friendly Monitoring Data System; Release 2.0 And Latest Enhancements Massimiliano Cannata	<b>39.4</b> OpenWIS Opensource Software <i>Jacques Roumilhac</i>	<b>40.4</b> Table Joining Service Implementation Using The GeoServer Platform José Luis Capote Fernández	
15:30 – 16:00	<b>37.4</b> Using Spatial Business Intelligence For Asset Management <i>Niels</i> Hoffmann	38.4 Semantically Enriching An Open Source SOS Implementation For Accessing Heterogeneous Environmental Data Sources Desiree Hilbring	<b>39.5</b> The Right Approach: How Toscana Is Migrating To GFOSS <i>Paolo Cavallini</i>	<b>40.5</b> The Architecture Of Mobile Traffic Map Service <i>BJ Jang</i>	
16:00 – 18:00	MetOffice HackathonAwar Sol Katz Award Keynotes: Emer Coleman(TS	r <b>d,</b> SB), Nathan Woodrow (QGIS)	N = Suitable	for Newbies	

### Remember there are also Free Workshops (page 49) and the Unconference (page 51) running today

			Sir Clive Granger   Sir Cl		
	EMCC: Room 2	EMCC: Room 4	A39	A41	Sir Clive Granger A31
	23.1 Online GIS - Meet The Cloud Publication Platforms That Will Revolutionize Our Industry Chris Brown	<b>24.1</b> A Benchmark Of Graphic APIs For Use In GIS Rendering Jared Neil Jacobson	25.1 A Generic Web Service For Ad-hoc Statistical Spatio- Temporal Aggregation Mario Härtwig	<b>26.1</b> A Cellular Automata Land-Use Model For The R Software Environment Richard Hewitt	<b>27.1</b> Keep Your Data & Metadata Synchronized Francois Prunayre
	23.2 Open Geospatial Data And Services Publication On The Cloud: The INGEOCLOUDS Open Source Approach Dimitris Kotzinos	<b>24.2</b> Cartopy And Iris: Open Source Python Tools For Analysis And Visualisation <i>lan Edwards</i>	<b>25.2</b> Innovations In Mapping Time-Based Data In CartoDB <i>Javier</i> Álvarez	<b>26.2</b> Bulk Interpolation Using the R Environment <i>Pavel Treml</i>	<b>27.2</b> Load Balancing Large Numbers Of OSGeo Components <i>Dragan</i> <i>Podvezanec</i>
	<b>32.1</b> iGUESS – The Good, The Bad And The Ugly Of Developing A Distributed Modeling System For European Cities <i>Chris</i> <i>Eykamp</i>	33.1 CDM & TDS Data Server: Earth & Ocean Sciences Meet GIS Marcos Hermida Mera	<b>34.1</b> Visualising 4D Weather Data <i>Chris Little</i>	<b>35.1</b> MapCache: The Fast Tiling Server From The MapServer Project <i>Thomas Bonfort</i> N	<b>36.1</b> Data And Visualization Integration Via Web Based Resources Massimo <i>Di Stefano</i>
	<b>32.2</b> VivaCity Smart City Platform <i>Marco Montanari</i>	<b>33.2</b> Machine Learning For Remote Sensing : Orfeo ToolBox Meets OpenCV <i>Julien Michel</i>	<b>34.2</b> WMS-V: A New Way To Visualise Geo-temporal Data <i>Tim-Hinnerk Heuer</i>	<b>35.2</b> Vector Pyramids: A Multi-scale Vector Rendering And Processing Algorithm <i>Mohammed</i> <i>Rashad</i>	<b>36.2</b> Interactive Visualisation Of The Energ Costs Of Commuting Robi Lovelace
	<b>32.3</b> ViziCities - Bringing Cities To Life Using Big Data And The Power Of The Web <i>Peter Smart</i>	33.3 Open Source Software For Land Cover Mapping From Remote Sensing Data <i>Pieter</i> Kempeneers			
	41.1 3D Web Services And Models For The Web: Where Do We Stand? Emmanuel Belo	<b>42.1</b> A New GIS Toolbox For Integrating Massive Heterogeneous GIS Data For Land Use Change Analysis <i>Birgit Laggner</i>			
	<b>41.2</b> A New Dimension To PostGIS : 3D <i>Olivier</i> Courtin	<b>42.2</b> ESA User Services Powered By Open Source Stephan Meissl	<b>43.1</b> AEGIS - A State- of-the-art Component- based Spatio-temporal Framework <i>Roberto</i> <i>Giachetta</i>	<b>44.1</b> Optimising Spatial Data Analysis With PostgreSQL And PostGIS Gianni Ciolli	
	<b>41.3</b> Glob3 Mobile. A New Approach To Mobile GIS 3d. <i>Manuel de la Calle Alonso</i>	<b>42.3</b> Implementation Of Standard Web Services For GOCE Data Exploitation <i>Marco</i> Negretti	<b>43.2</b> Evaluating Open Source GIS Techniques For Addressing Database, Analysis And Visualization Aspects Of Spatiotemporal Information <i>Lynnae Sutton</i>	<b>44.2</b> PostGIS Feature Frenzy Paul Ramsey N	
	41.4 Management Of 3D City Models In PostGIS With The 3D City Database Claus Nagel	<b>43.4</b> PyModis: The Python Library For MODIS Data <i>Luca Delucchi</i>	<b>43.3</b> GRASS As Temporal GIS Sören Gebbert	<b>44.3</b> PostMap – The PostGIS Web Client Jan Jezek N	
	41.5 Modelling 3D Underground Data In A Web-based 3D-Client <i>Till</i> Adams	<b>43.5</b> Towards Big Earth Data Analytics: The EarthServer Approach Peter Baumann	43.4 GeoServer for Spatio-temporal Data Handling With Examples For MetOc And Remote Sensing Daniele Romagnoli		

### Presentation Timetable for Saturday, 21 September 2013

Time	Auditorium	Banqueting Suite	EMCC: Room 3	EMCC: Room 1
9:00 – 9:30	<b>46.1</b> GeoPackage, The Shapefile Of The Future <i>Pirmin Kalberer</i>	47.1 Opening Up Access To Geological Data With Rasdaman Based WCS And WCPS Services J Passmore	<b>48.1</b> MapProxy – Past, Present, Future <i>Oliver</i> <i>Tonnhofer</i>	<b>49.1</b> Concurrent Online Webgis: A New Way To Map Together Steven M. Ottens
9:30 – 10:00	<b>46.2</b> pycsw: Metadata Publishing Just Got Easier <i>Angelos Tzotsos</i> <b>N</b>	<b>47.2</b> OS Geospatial Technologies + Science Data For Evidence-Based Decision Making David Medyckyj-Scott	<b>48.2</b> Storing, Querying, And Mapping Global Collection Of Night-time Light Data With Open Source GIS Software <i>Qing Liu</i>	<b>49.2</b> SVG Map - Tile Map Without Javascript <i>Taro</i> <i>Matsuzawa</i>
10:00 – 10:30	46.3 Using Free And Open Source GIS To Automatically Create Standards-Based Spatial Metadata In Academia Claire Ellul	47.3 Using FOSS4G Software For Flight Planning <i>Blake Crosby</i>	48.3 Working With Spatial Databases With GeoAlchemy Eric Lemoine	49.3 Tiles And More - Deegree Freshly Implements WMTS Sebastian Goerke
10:30 - 11:00	Break	1	7	-
11:00 – 11:30	55.1 Geospatial Github Christopher Helm - 11:30	<b>56.1</b> Communicating Data Quality Through Web Map Services <i>Jon Blower</i>	<b>57.1</b> MapServer Project Status Report - Meet The Developers! <i>Daniel</i> <i>Morissette</i>	<b>58.1</b> Fast Tiling And Presentation Of TB's Aerial Image Data <i>Herman Assink</i>
11:30 – 12:00	<b>55.2</b> Inside GeoGit: Decentralized Versioning Of Geospatial Data For Developers <i>Gabriel Roldán</i>	<b>56.2</b> WCS And EO-WCS Status In Open Source Stephan Meissl	<b>57.2</b> MapServer REST API Guillaume Sueur	<b>58.2</b> Faster Rasters For All <i>Graeme Bell</i>
12:00 – 12:30	<b>55.3</b> Introduction To GeoGit: Distributed Versioned Editing For Geospatial Features <i>Scott Clark</i> N	<b>56.3</b> ZOO-Project 1.3.0: The WPS Developing Environment <i>Gérald Fenoy</i>	<b>57.3</b> Migration To Open Source Database Systems <i>Age Nielsen</i>	58.3 Raster Data In GeoServer And GeoTools: Achievements, Issues And Future Developments Simone Giannecchini
12:30 – 13:00				<b>58.4</b> TileServer: Hosting Map Tiles And MBTiles Petr Pridal
13:00 - 13:30	Lunch			
13:30 – 14:00			<b>64</b> Gamification In GIS Doh Kyoung Tae	<b>65</b> Space, Place And Psychogeography <i>Tim</i> <i>Water</i> s
14:00 – 15:00	Web Mapping Performance	e Shootout		
15:00 – 1630	Map Gallery Award(s) Keynotes: lan James (OS), Closing Remarks, FOSS40			

N = Suitable for Newbies

EMCC: Room 2	EMCC: Room 4	Sir Clive Granger A39	Sir Clive Granger A41	Sir Clive Granger A31
<b>50.1</b> Mappy-ng Open Source <i>Audrey Malherbe</i>	<b>51.1</b> GeoHashTree, A Multi-resolution Data Structure For Managing Point Clouds In PostgreSQL <i>Nouri Sabo</i>	<b>52.1</b> Analysis Of Realtime Stream Data With Anvil <i>Andrew Turner</i>	<b>53.1</b> GraphGIS, Bringing Spatial Functionalities To NoSQL Graph Databases Frédéric Houbie	<b>54.1</b> Coordinate Reference System Challenges In GeoScience Modelling <i>Mark</i> <i>Hedley</i>
<b>50.2</b> Open Source In Accessibility Analyses Stefan Neumeier	<b>51.2</b> LIDAR In PostgreSQL With Pointcloud <i>Paul</i> Ramsey	<b>52.2</b> OpenLayers 3 Showcase <i>Tom Payne</i> <b>N</b>	<b>53.2</b> Lucene Spatial - The Forgotten NOSQL Spatial Datastore Steven Citron-Pousty	<b>54.2</b> Coordinate Systems: PROJ.4, EPSG And OGC WKT <i>Frank Warmerdam</i>
<b>50.3</b> Taming Rich GML With stETL, A Lightweight Python Framework For Geospatial ETL <i>Just van den Broecke</i>	<b>51.3</b> PDAL: It Rhymes With GDAL <i>Michael Smith</i>	<b>52.3</b> Real-time Data Analysis And Rendering With HTML5 Canvas Using OpenLayers And GeoServer <i>Tom Kunicki</i>	<b>53.3</b> Using NoSQL & HTML5 Libraries To Rapidly Generate Interactive Web Visualisations Of Highvolume Spatio-temporal Data Jack Harrison	<b>54.3</b> Old Maps Online And Georeferencer <i>Petr Pridal</i>
<b>59.1</b> Water Quality Forecast And Information System Built With FLOSS Software Vasile Cr ciunescu N	<b>60.1</b> Leaflet: Past, Present, Future Vladimir Agafonkin	<b>61.1</b> Application Development With OpenLayers 3 <i>Tim Schaub</i> <b>N</b>	<b>62.1</b> GeoCouch: An N-dimensional Index For Apache CouchDB And Couchbase <i>Volker Mische</i>	<b>63.1</b> GIS For All: Exploring The Barriers And Opportunities For Underexploited GIS Applications <i>Hao Ye</i>
<b>59.2</b> Web Processing Services Using OS OpenData Hugo Martins	<b>60.2</b> Mapbender3 - Create Your Own Geoportal Web Application And Service Repository <i>Astrid Emde</i> N	<b>61.2</b> OpenLayers 3 - How To Successfully Run A Crowdfunding Campaign For An OSS Project Cédric Moullet	<b>62.2</b> Getting The Best Performance For GeoJSON Map Visualizations: PostGIS Vs CouchDB Backend Luca Morandini	<b>63.2</b> How To Create A Geocoded Town - Monmouthpedia And Gibraltarpedia Roger Bamkin
<b>59.3</b> WebGIS Applications For The New Generation Of Hydrological Models Claudia Vitolo	<b>60.3</b> MapFish Framework <i>Elisabeth Leu</i>	<b>61.3</b> OpenLayers 3: Under The Hood <i>Tom Payne</i>	<b>62.3</b> Polyglot Spatial With MongoDB Steven Citron-Pousty	<b>63.3</b> Using OSGeo Live In MSc Teaching Jeremy Morley
	<b>60.4</b> Open Source Web And Mobile Mapping Applications In Utilities And Telcos <i>Peter Batty</i>			
66 GIS Is Not Dead, It's Coming For You And It's Been Drinking JavaScript Christopher Helm	<b>67</b> Qualifying For Open Source <i>Arnulf Christl</i>			

### Presentation Details

Add the short **URI** to the end of http://2013.foss4g. org/" to go to a presentation page online.

#### Session 1, Auditorium

Thursday 19th, 12:00 to 13:00

#### All The New Cool Stuff In QGIS 2.0

Nathan Woodrow (Digital Mapping Solutions)

A quick overview of all the new cool features in QGIS 2.0 - printing, blending, snapping and much, much more.

Tags: project, showcase, qgis

URI: /p/15

#### **QGIS As A Platform**

Vincent Picavet (Oslandia)

Quantum GIS has evolved from a GIS desktop application to a GIS platform - let's see what you can do with it!

Tags: project, newbie, qgis

URI: /p/135

#### Session 2, Banqueting Suite

Thursday 19th, 12:00 to 13:00

### A Toe In The Water – Using Open Source Software To Support Catchment Management Planning

Michelle Walker (The Rivers Trust)

The Rivers Trust demonstrate how open source software and data is improving the sharing of information, leading to better decision-making and ultimately more sustainable management of rivers and their catchments.

Tags: government, casestudy

URI: /p/11

### User-centered Design For map.geo.admin.ch, Or How To Create A Usable Geoportal

Cédric Moullet (swisstopo)

This presentation will describe how to make a geoportal used and useful.

Tags: government,casestudy,sdi,portal

URI: /p/168

#### Session 3, EMCC: Room 3

Thursday 19th, 12:00 to 13:30

### A Reusable INSPIRE Reference Platform: Supporting Open Source Developments For INSPIRE Implementation And Reuse

Piergiorgio Cipriano (EC Joint Research Centre)

The implementation of the European INSPIRE Directive will benefit from the reuse of a constellation of technical assets, including the key contribution of open source software; where the identification and sharing of components through a reference platform (ARE3NA) aims to provide additional benefits for those wanting to adopt interoperable cross-sector and cross-border geospatial data beyond the initial environmental policy context of INSPIRE.

Tags: standards,sdi

URI: /p/10

### Create And Use INSPIRE Harmonised Geodata With HALE

Silvia Franceschi (HydroloGIS) Andrea Antonello (HydroloGIS)

HUMBOLDT Alignment Editor (HALE) is a Free and Open Source solution for interactive geodata harmonisation. The presentation will start with a short introduction on HALE, then a practical showcase on how data can be transformed to comply to the INSPIRE Data Specification for some spatial data themes defined in Annex I, II and III.

Tags: catalog,sdi

URI: /p/36

### **Creating A Web Atlas In An SDI Environment Using The D3 Library**

Barend Köbben (ITC-University of Twente)

We describe how we have created an Atlas Map Viewer component, using the Open Web Platform and the D3 JavaScript library to map data in an SDI environment.

Tags: javascript, visualisation, sdi, under the hood

URI: /p/37

#### Session 4, EMCC: Room 1

Thursday 19th, 12:00 to 13:30

#### **Mapping For Rights**

Georges Thierry Handja

(Rainforest UK and Lutra Consulting)

Peter Wells (Lutra Consulting)

Rainforest Foundation UK's participatory mapping programme allows forest communities to secure rights to the lands on which they depend, more recently with the adoption of open source GIS technologies for data storage, presentation and remote surveying.

Tags: casestudy,humanitarian

URI: /p/97

## Realization Of A Web-based Fire Danger Forecasting System For Mediterranean Landscapes

Michael Nolde (Kiel University)

The presentation covers the realisation of a fire danger forecasting platform for the Isle of Sardinia, using crowd-sourced weather data, and only free and open source software.

Tags: casestudy,humanitarian

### Wide Area Alerting And Notification System For Wildfires (and Other Nasties)

Graeme McFerren (CSIR Meraka)

Cheewai Lai (CSIR Meraka)

Derick Swanepoel (CSIR Meraka)

Describes a case study, use cases and heavy use of FOSS4G and other FOSS software in a large alerting and notification system in the vegetation wildfire domain.

Tags: casestudy,humanitarian

URI: /p/186

#### Session 5, EMCC: Room 2

Thursday 19th, 12:00 to 13:30

#### **An Introduction To Open Source Geospatial**

Arnulf Christl (metaspatial)

This is a presentation focused on gently introducing the unitiated to the concepts of Open Source, Free Software licenses and the associated business models.

Tags: business, newbie

URI: /p/17

#### **Open Data For Real**

Arnulf Christl (metaspatial)

David Overton (SplashMaps)

This presentation goes into the details of Open Data and how to use it.

Tags: business,newbie,opendata,hacks/mashups

URI: /p/111

#### **Painless Loading Of National Open Data Sources**

John Birkett (Brent Council)

We describe a painless, automated process of loading cumbersome collections of open data that leads from data ordering to ready-to-use in a day, using some simple scripting and Postgres/PostGIS, with minimal officer input!

Tags: opendata,hacks/mashups,postgis

URI: /p/125

#### Session 6, EMCC: Room 4

Thursday 19th, 12:00 to 13:30

### **ODVIS.AT - Visualization Of Austrian Open Government Data**

Marius Schebella (Salzburg University of Applied Sciences) This project combines the visualisation of Austrian open government data with Open Street Map.

Tags: openstreetmap,opendata,government,visualis ation

URI: /p/108

### OpenPOIs: An Open Source, Open Data Index To POIs

Raj Singh (Open Geospatial Consortium)

OpenPOIs is an open database containing points of interest (POIs) and links to other POI databases such as Geonames, OpenStreetMap, DBPedia, Futouring and the Harvard China Biographical Database.

Tags: opendata, openstreet map

URI: /p/120

#### An Open Source Analysis Toolbox For Street Network Comparison: How OSM Compares To The Official Austrian Reference Graph

Anita Graser (AIT Austrian Institute of Technology)
Markus Straub (Austrian Institute of Technology)
Melitta Dragaschnig (Austrian In stitute of Technology)

This paper presents a novel open source toolbox for street network comparison, based on the Sextante geoprocessing framework for Quantum GIS (QGIS). The toolbox enables researchers worldwide to assess the quality of street networks such as OpenStreetMap by calculating key performance indicators commonly used in street network comparison studies.

Tags: academic,qgis,openstreetmap,underthehood

URI: /p/166

### **Session 7, Sir Clive Granger Building: A39**

Thursday 19th, 12:00 to 13:00

#### Big Data In Standardization: Can This Fly?

Peter Baumann (Jacobs University)

We discuss standards in OGC, ISO, and INSPIRE to find out whether they support or inhibit scalable spatio-temporal services.

**Tags**: bigdata,standards

URI: /p/21

### STOQS: The Spatial Temporal Oceanographic Query System

Mike McCann (Monterey Bay Aquarium Research Institute)
Deep exploration of campaign-oriented in-situ
oceanographic measurements is made possible by
open source geospatial software.

Tags: science, casestudy

URI: /p/150

#### Session 8, Sir Clive Granger Building: A41

Thursday 19th, 12:00 to 13:00

#### pgRouting For Dummies

Julien-Samuel Lacroix (Mapgears)

You may think that adding driving directions to your web mapping application is complicated. Please stand corrected!

Tags: newbie,underthehood

### **Subsidized School Transport For The Shortest Way To School**

Oliver May (DFC Software Engineering)

A presentation of a tailor-made project for managing subsidized school transport using open source technologies and routing.

Tags: newbie,government,casestudy

URI: /p/152

#### Session 9, Sir Clive Granger Building: A31

Thursday 19th, 12:00 to 13:00

#### **Boost.Geometry, Introduction And Examples**

Barend Gehrels (Self-employed)

Mateusz Loskot (Cadcorp)

The first part of the presentation gives an accessible introduction to Boost Geometry. The second part focuses on some algorithms in detail.

Tags: newbie,underthehood

URI: /p/22

### Bytecode Unification Of Geospatial Computable Models

Jan Kolar (Grifinor Project)

The presentation addresses the divide caused by field-based and object-based data models, and other challenges regarding synergy of geospatial systems that need to use both types of data models. We consider functional, semantic, and even structural aspects of data models.

Tags: academic, standards, analysis

URI: /p/26

#### Session 12, EMCC: Room 3

Thursday 19th, 14:00 to 16:00

### **Building A Research Data Management Infrastructure Using Open Source Software**

Christian Willmes (University of Cologne)

Based on well-established FOSS products such as MapServer, MapProxy, GeoExt and pyCSW, as well as the (not primarily geospatial) open source technologies Typo3 and CKAN, we are presenting the implementation of a research data management infrastructure for a large interdisciplinary research project.

Tags: academic, standards, sdi, portal

URI: /p/24

### **Delivering High Performance Spatial Data Infrastructures Using FOSS4G Components**

Mark Bishop (Envitia Ltd) Alan Crisp (Envitia Ltd) Matthew Wood (Envitia Ltd)

Envitia will outline the experiences gained and benefits resulting from delivering Open Spatial Data Infrastructures to clients including the Welsh Government, UK Hydrographic Office and Royal Brunei Armed Forces for business and/or mission critical applications. These projects have been proven to break down perceived barriers to open

source adoption by providing highly performant, secure and future-proof systems whilst ensuring the lowest possible TCO.

Tags: business, government, sdi

URI: /p/42

### MapMint: An Innovative SDI Authoring Platform Based On FOSS4G

Nicolas Bozon (Cartogenic) Gérald Fenoy (GeoLabs) Naoki Ueda (Cartoworks)

MapMint: Never write mapfiles again! Tips and tricks for playing with OGC standards using FOSS4G (MapServer, ZOO-Project, GDAL,OpenLayers).

**Tags**: mapserver,standards,project,sdi,openlayers,ha cks/mashups

URI: /p/96

### Using CKAN As A Catalog For Geospatial Data: Building The Next Generation Of geo.data.gov

Adrià Mercader (Open Knowledge Foundation)
Irina Bolychevsky (Open Knowledge Foundation)
CKAN is the most widely used open source data portal software across the world, built on open standards to make data easily discoverable and reusable. This presentation explores the features which allow publishing geospatial metadata with CKAN, providing an alternative to traditional geospatial catalogs, and more particularly how it has been used to build the new version of geo.data.gov, the US Government official online data catalog.

Tags: catalog,opendata,sdi,portal

URI: /p/169

### Session 13, EMCC: Room 1

Thursday 19th, 14:00 to 16:00

### **Building Catastrophe Models With Open Data And Open Software**

Chris Ewing (Aon Benfield)

A catastrophe model estimates the potential loss of property and life following a major catastrophic event and can be built using Open Source software and improved with Open Data.

**Tags**: opendata,casestudy,catastrophe,humanitarian

URI: /p/23

### **Epidemiology With An Open Source WebGIS Platform**

Claudia Dolci (Fondazione Bruno Kessler) Gabriele Franch (Fondazione Bruno Kessler) Shamar Droghetti (Fondazione Bruno Kessler)

We present a statistical WebGIS platform integrating visualization tools and statistical functions for epidemiological studies, entirely based on Open Source technologies. An application for cancer mapping and environmental cancer studies is the Cancer Atlas (CA-TN), the GeoICT platform of the Cancer Registry of Trentino (Italy).

Tags: science, casestudy, visualisation

## Integrating Collaborative Data Collection And Versioning Into Open Source Tools For Humanitarian Assistance/Disaster Relief.

David Askov (Pacific Disaster Center) Chris Chiesa (Pacific Disaster Center) Scott Clark (LMN Solutions, LLC)

ROGUE (Rapid Open Geospatial User-Driven Enterprise) is a 2-year project funded under the Joint Capability Technology Demonstration (JCTD) Program to add functionality to the OpenGeo Suite to allow users to collaboratively develop geospatial data in a disconnected environment, version the collected data, and create a federated collection of nodes that can search, discover, and display the latest data edits in support of humanitarian assistance and disaster relief efforts.

Tags: project, casestudy, humanitarian

URI: /p/80

#### Taarifa: Improving Public Service Provision In The Developing World Through A Crowd-sourced Location Based Reporting Application

Mark Iliffe (University of Nottingham)

Jeremy Morley (Nottingham Geospatial Institute, University of Nottingham)

Giuseppe Sollazzo (St. George's University of London)
Robert Houghton (University of Nottingham)
Public service provision in the developing world is challenged by a lack of coherence and consistency in the amount of resources local authorities have.
Especially where non-planned urban settlements (e.g. slums) are present, the frequent change of the urban environment poses big challenges to the effective delivery of services. In this paper we report on our experiences with Taarifa: a location-based application built through community development that allows community reporting and managing of local issues.

Tags: academic,project,mobile,humanitarian

URI: /p/154

#### Session 14, EMCC: Room 2

Thursday 19th, 14:00 to 16:00

#### **Doing Business With FOSS**

Dirk Frigne (Geosparc)

How to make money with FOSS while keeping your customers happy? This presentation will show alternative answers from personal experience as cofounder of Geosparc.

Tags: business, newbie

URI: /p/45

#### **Mapping Open Data With Open Source Software**

Nicolas Bozon (Cartogenic)

A generic method to map open data using MapServer, OpenLayers and other FOSS4G tools.

**Tags**: project,opendata,openlayers,showcase,maps

erver URI: /p/98

#### The Met Office Open Data Journey

Clare Hubbard (Met Office)

In November 2011, the UK Met Office launched DataPoint: an Application Programming Interface (API) for the release of its Open Data, in support of the Government's desire for increased transparency and economic growth. Starting with just a handful of users, the service has grown in data, functionality and usage. This year the we are making further developments, responding to user feedback and ensuring INSPIRE compliance. This presentation will describe the journey so far and a forecast for the future.

Tags: opendata,government,casestudy,sdi

URI: /p/161

#### **The Business Case For Open Standards**

Peter Controneo (Ordnance Survey)

The use of open standards has brought considerable business value to Ordnance Survey, Great Britain's national mapping authority. We participate in the development process for open standards in standards bodies and are an early adopter of many. This has enabled us to future-proof internal information systems, foster innovation within new product development and better serve data to customers.

Tags: business, newbie

URI: /p/192

#### Session 15, EMCC: Room 4

Thursday 19th, 14:00 to 16:00

### MapCollaborator - Shared Data Made Easy

Robert Graham (GreenInfo Network)

This presentation proposes to explain, discuss, and demonstrate the open source infrastructure supporting MapCollaborator, a highly customizable map wiki that allows organizations to crowdsource a wide range of geographic data and related information.

Tags: project URI: /p/94

### OSM-GB: Using Open Source Geospatial Tools To Create OSM Web Services For Great Britain

Amir Pourabdollah (The University of Nottingham)
A use case of integrating a variety of open-source geospatial tools is presented for processing and openly re-delivering open data in open standards. Through a software engineering approach, we have focused on the potential usability of OpenStreetMap in authoritative and professional contexts in Great Britain.

**Tags**: academic,project,openstreetmap,portal

#### Things To Do With OpenStreetMap

Gemma Boix Xamani (SIGTE-Universitat de Girona)
Lluis Vicens Franquesa (SIGTE-Universitat de Girona)
Toni Hernandez Vallés (SIGTE-Universitat de Girona)
OpenStreetMap is much more than a set of data.
In this presentation we show a good portion of the possibilities it offers. We will see, first of all, what data one can download from OpenStreetMap and how it can be downloaded in a personalized way, employing customizable criteria. In addition to downloading, we look at other tools that add value to OSM: editors, importers to databases, geolocation services, image rendering, routing algorithms, etc.

**Tags**: newbie,opendata,openstreetmap

URI: /p/163

#### Virtual Coast Guard - An Open And Crowdsourced GIS Portal For Stewardship Of India's Coast

Alpesh Gajbe (Tata Institute of Social Sciences)
Adya Shankar (Tata Institute of Social Sciences)
Sudarshan Rodriguez (Tata Institute of Social Sciences)
India's coastline is under tremendous pressure development is becoming a threat to the ecology
and livelihoods housed on the coast. The Coastal
Area Mapping Project (CAMP) envisions creating
a collaborative GIS platform using open source
technologies.

Tags: academic,project,portal

URI: /p/176

#### Session 10, Auditorium

Thursday 19th, 14:30 to 16:00

### **MOLUSCE – An Open Source Land Use Change Analyst**

Matteo Gismondi (Asia Air Survey)

A Quantum GIS plugin called MOLUSCE (Modules for Land Use Change Evaluation) is currently under development. MOLUSCE is a tool for analysing, modelling and simulating land use changes.

Tags: project,qgis,analysis,underthehood

URI: /p/107

#### **QGIS In The Cloud**

Marco Hugentobler (Sourcepole AG)

This presentation shows the recent developments in the QGIS cloud project.

Tags: project, showcase, cloud, qgis

URI: /p/136

#### **QGIS Server, QGIS Web Client And QGIS Cloud**

Andreas Neumann (City of Uster, Switzerland)
Marco Hugentobler (Sourcepole AG)

The aim of the QGIS suite is to provide, next to QGIS Desktop, a web client, a mobile client and OGC geoservices, all from a single project file. This presentation demonstrates recent developments in QGIS server and QGIS web client, and also demonstrates how a QGIS project can be published in the QGIS cloud.

Tags: project, newbie, ggis

URI: /p/137

### Session 11, Banqueting Suite

Thursday 19th, 14:30 to 16:00

### Disconnected Geospatial Mobile & "Open Source" 5 Rules To Success?

Pascal Coulon (SCISYS)

We present the challenges of building a disconnected geospatial mobile solution and devise five simple rules for the success of your app.

Tags: mobile,casestudy,development,portal

URI: /p/44

### Mobile Development With OpenLayers, Sencha Touch And PhoneGap

Bart van den Eijnden (OpenGeo)

Pierre Giraud (Camptocamp)

In this presentation we will share our experiences of working with OpenLayers for mobile applications, in combination with the Sencha Touch framework and PhoneGap.

**Tags**: project,openlayers,casestudy,mobile

URI: /p/105

### Web-based Participatory GIS With Data Collection In The Field: A Prototype Architecture

Marco Minghini (Politecnico di Milano - DICA)
Maria Antonia Brovelli (Politecnico di Milano - DICA)
Giorgio Zamboni (Politecnico di Milano - DICA)
Driven by the rise of Web 2.0 and the non-stop spread of mobile device sensors, Participatory
GIS (PGIS) is part of a new, revolutionary era. This research investigates the building of a prototype of PGIS, with completely FOSS architecture, in which data directly comes from field surveys carried out by users. The system should increase public active participation in data creation and sharing, and enhance knowledge at the local level.

Tags: academic,opendata,mobile,development

### Session 16, Sir Clive Granger Building:

Thursday 19th, 14:30 to 16:00

#### **Gestural Interaction With Spatiotemporal Linked Open Data**

Thomas Bartoschek (Institute for Geoinformatics, University of Münster)

Gerald Pape (Institute for Geoinformatics,

University of Münster)

Christian Kray (Institute for Geoinformatics,

University of Münster)

Jim Jones (Institute for Geoinformatics,

University of Münster)

Tomi Kauppinen (Aalto University)

In this case study we made use of large amounts of Linked Open Data about the deforestation of the Brazilian Amazon Rainforest and related ecological, economical and social factors. The results of our study indicate that people of all ages can easily learn gestures and successfully use them to explore the visualized and aggregated spatiotemporal data about the Brazilian Amazon Rainforest.

Tags: academic,project,opendata,portal

URI: /p/66

#### **Introduction To Location And Linked Data**

John Goodwin (Ordnance Survey)

This talk gives an introduction to linked data, and will focus on challenges around constructing linked data for geographic and spatial information. Examples will focus on work being done at Ordnance Survey and the wider UK Government.

Tags:

URI: /p/190

### The RAGLD (Rapid Assembly Of Geo-centred **Linked Data) Framework**

John Goodwin (Ordnance Survey)

This talk will describe the RAGLD framework (Rapid Assembly of Geo-centred Linked Data) and examples will be given on how it can be used to make it easier to develop linked data applications.

Tags:

URI: /p/191

### **Session 17, Sir Clive Granger Building:**

Thursday 19th, 14:30 to 16:00

#### **Linear Referencing And Dynamic Segmentation** For Modelling (linear) Assets: An Application For A Road Network.

Andrés Maneiro (iCarto)

This session will look into how advanced data modeling methods - linear referencing and dynamic segmentation - can be useful in working with assets such as roads, water and sanitation networks, rivers or electrical grids. We will showcase a custom solution based on PostGIS and gvSIG for road networks which is used in the regional administration of Lugo, Galicia, northwest of Spain.

Tags: gvsig,government,casestudy,postgis

URI: /p/75

### MapRoad Pavement Management System - A **Cross Platform GIS Roads Management Toolkit**

Seth Girvin (Compass Informatics) Andy Day (Compass Informatics Limited)

Paul Fox (Local Government Management Agency)

The MapRoad Pavement Management System supports the monitoring and management of 90,000km of Irish roads via an integrated desktop, web, and smart mobile solution. The web solution is built on open source software combined with existing proprietary databases and desktop GIS allowing minimum disruption to workflows during development and rollout. Open standards are used to communicate between different system components.

Tags: newbie,government,casestudy

URI: /p/101

#### **Shortest Path Search For Real Road Networks** With pgRouting

Hal Seki (Georepublic Japan)

Mario Basa (Georepublic)

Ko Nagase (Georepublic Japan)

pgRouting adds routing functionality to PostGIS, and this presentation will give an overview of the current state of the project, and introduce the new and revised features of the new release in 2013.

Tags: project, development, postqis

### **Session 18, Sir Clive Granger Building:** A31

Thursday 19th, 14:30 to 16:00

#### **GDAL/OGR Project Status**

Frank Warmerdam (Google)

An overview of the capabilities of the GDAL/OGR (Geospatial Data Abstraction Library) project will be covered, followed by a focus on new developments in the last two years and future directions for the project.

Tags: project, showcase, gdalogr, development

URI: /p/56

### Geographic Scripting In uDig: Halfway Between Developer And User

Andrea Antonello (HydroloGIS) Silvia Franceschi (HydroloGIS)

An introduction to the scripting editor of uDig will be given, as well as some hints about how the most common operations in GeoScript are performed. It will also be shown how GeoScript can be extended to do geomorphologic processing through the JGrasstools project libraries in uDig.

Tags: project, under the hood

URI: /p/59

#### **Spot On Geomajas - A General Introduction**

Frank Maes (Geomajas)

An overall introduction to the Geomajas web GIS software, with live demos.

Tags: project, showcase, geomajas, newbie

URI: /p/148

#### Session 19, Auditorium

Friday 20th, 09:00 to 10:00

### FOSS4G In AWS: Choosing, Deploying And Tuning Open Source Components In AWS

Mohamed Sayed (Nokia & OpenEgypt & others.)

This presentation will show methods of working with AWS to design, deploy and tune Open source software with an end goal to bring up various geo-oriented full stacks. This includes databases, tile renderers, geocoders, routers with all dependencies. It will cover choosing the components, the deployment posture, prototyping, designing for cloud scalability, performance benchmarking and ongoing maintenance. Most of the concepts will lend themselves well to other public or private cloud situations.

Tags: casestudy, cloud

URI: /p/53

#### The Geodata Agency's Data Distribution Platform

Morten Lindegaard (Danish Geodata Agency)
Mads Bjørn-Møldrup (Danish Geodata Agency)

An overview of the Danish Geodata Agency's Data Distribution platform, which handles more than 100,000,000 requests per month, using PostGIS, MapServer, GeoWebCache and GeoServer.

Tags: government, casestudy

URI: /p/159

#### Session 20, Banqueting Suite

Friday 20th, 09:00 to 10:00

#### **GeoServer On Steroids**

Simone Giannecchini (GeoSolutions S.A.S.)

Alessio Fabiani (GeoSolutions s.a.s.)

Andrea Aime (GeoSolutions s.a.s.)

Setting up a GeoServer can sometimes be deceptively simple. However, going from proof-of-concept to production requires a number of steps to be taken in order to optimize the server in terms of availability, performance and scalability. The presentation will show how to get from a basic setup to a battle-ready, rock-solid installation.

Tags: project, geoserver, newbie

URI: /p/63

#### **GeoServer, An Introduction For Beginners**

Alessio Fabiani (GeoSolutions s.a.s.)

Andrea Aime (GeoSolutions s.a.s.)

This presentation will provide an introduction to the GeoServer project and its abilities to publish data with a mix of well-known OGC protocols and other popular protocols and data formats.

Tags: project, geoserver, newbie

URI: /p/64

#### Session 21. EMCC: Room 3

Friday 20th, 09:00 to 10:00

### Deegree: Turn-key Solution For Interoperable INSPIRE Download Services

Markus Schneider (Occam Labs)

This presentation outlines the requirements and the successful implementation of compliant INSPIRE Download Services using FOSS.

Tags: project, casestudy, sdi

### Spatial Data Infrastructure Of Bolivia's Plurinational State: A Free And Democratic SDI

Raul Fernando Molina Rodriguez (GeoBolivia)

The vice-presidency of the State, in partnership with the GeoBolivia Project, are constructing the Plurinational State of Bolivia's Spatial Data Infrastructure (IDE-EPB by its Spanish initials), of which the first phase is complete. This consisted of the implementation of a platform a geoportal that allows access to the country's geographical information of reference, through WMS, WFS, WCS and CSW services.

Tags: academic,project,sdi,portal

URI: /p/146

#### Session 22, EMCC: Room 1

Friday 20th, 09:00 to 10:00

#### **Choosing The Right Data Store**

Andrew Ross (LocationTech)

An architectural view of application data model and data storage technologies.

Tags: development, under the hood

URI: /p/31

#### **GIS Data Security Applied**

Joachim Van der Auwera (Geomajas) Oliver May (DFC Software Engineering)

This presentation will be a deep-dive on how security can be applied within web GIS solutions.

**Tags**: underthehood

URI: /p/68

#### Session 23, EMCC: Room 2

Friday 20th, 09:00 to 10:00

### Online GIS - Meet The Cloud Publication Platforms That Will Revolutionize Our Industry

Chris Brown (MangoMap)

A presentation looking at the products featured in my recent book "Online GIS - Meet the Cloud Publication Platforms that Will Revolutionize our Industry" and the underlying open source technologies that made them all possible.

Tags: business, cloud

URI: /p/110

#### Open Geospatial Data And Services Publication On The Cloud: The INGEOCLOUDS Open Source Approach

Dimitris Kotzinos (FORTH and TEI of Serres) Benoit Baurens (AKKA Techologies)

We provide an open source software stack which adapts existing open source products (e.g. Mapserver, PostGIS, etc.) for a cloud-based environment allowing them to take advantage of the scalability and elasticity properties of the cloud. On top of that we built a set of geospatial services allowing the user to dynamically publish his own data and create his own services on the cloud or exploit existing services by using either already available data or his own.

Tags: project, cloud

URI: /p/112

#### Session 24, EMCC: Room 4

Friday 20th, 09:00 to 10:00

### A Benchmark Of Graphic APIs For Use In GIS Rendering

Jared Neil Jacobson (Centre for Geoinformation Science, University of Pretoria)

We will present a look at the rendering performance of several graphics Application Programming Interfaces (APIs) with a focus on geographic map rendering. A mixture of 2D and 3D engines will be benchmarked.

Tags: academic,3d,development,underthehood

URI: **/p/3** 

### **Cartopy And Iris: Open Source Python Tools For Analysis And Visualisation**

Ian Edwards (Met Office)

Cartopy is a new python mapping library for the transformation and visualisation of geospatial vector and raster data. Iris implements a generalised n-dimensional gridded data model, enabling powerful analysis of 3D, temporal and big data.

Tags: python,3d,visualisation

URI: /p/29

### **Session 25, Sir Clive Granger Building:** A39

Friday 20th, 09:00 to 10:00

### A Generic Web Service For Ad-hoc Statistical Spatio-Temporal Aggregation

Mario Härtwig (Geoinformation Systems, Dresden University of Technology)

Matthias Müller (Geoinformation Systems, Dresden University of Technology)

For the analysis of geospatial data, statistical spatio-temporal aggregation (SSTA) is a common operation. This presentation demonstrates a generic framework for SSTA within an SDI, so that users can easily perform a statistical ad-hoc aggregation of distributed spatio-temporal data.

Tags: academic, standards, sdi, analysis

### Innovations In Mapping Time-Based Data In CartoDB

Javier Álvarez (Vizzuality/CartoDB) Javier de la Torre (Vizzuality/CartoDB)

The ability to map live data and share visualizations of data that changes through time is an exciting area of research at CartoDB and we will report on some of the key innovations we have developed.

Tags: project, showcase, visualisation

URI: /p/78

### **Session 26, Sir Clive Granger Building:** A41

Friday 20th, 09:00 to 10:00

### A Cellular Automata Land-Use Model For The R Software Environment

Richard Hewitt (University of Alcalá, Madrid, Spain)

Borja Moya-Gómez (Madrid Complutense University)
Jaime Diaz-Pacheco (Madrid Complutense University)
A cellular automata model of land-use change
developed in the free and open source software
environment R is presented. The advantages offered
by R as a development environment for a CA landuse model are evaluated, and the pros and cons of

the approach employed are discussed in depth with

Tags: project, science, casestudy

reference to commercial alternatives.

URI: /p/4

#### **Bulk Interpolation Using the R Environment**

Pavel Treml (T.G. Masaryk Water Research Institute,p.r.i.) Ji í Kadlec (Aalto University)

We present the development and application of a script for bulk assessment and interpolation of data using the R language and platform, demonstrating automation for repeated GIS tasks.

Tags: project, analysis, development

URI: /p/25

### **Session 27, Sir Clive Granger Building:** A31

Friday 20th, 09:00 to 10:00

#### **Keep Your Data & Metadata Synchronized**

Francois Prunayre (titellus)

Mathieu Coudert (Astrium GEO-Information Services) Exploring use cases where the synchronization mechanism between data and their metadata could improve SDI user experience

Tags: catalog,sdi URI: /p/84

### **Load Balancing Large Numbers Of OSGeo Components**

Dragan Podvezanec (IGEA d.o.o.)

Dalibor Kuši (IN2 d.o.o.)

Sasa Cvitkovic (Croatian State Geodetic Administration)

Through the use of OpenSource HAproxy component, we created a large cluster of PostGIS,

Geoserver and GeoWebCache components used as one of the cornerstones of the Croatian NSDI.

Tags: postgis,geoserver,sdi,development,undertheh ood

URI: /p/88

### Session 28, Auditorium

Friday 20th, 11:30 to 12:30

#### **Data-driven Report Writing With R And QGIS**

Barry Rowlingson (Lancaster University)

Presenting tools and techniques for making datadriven writing with open-source GIS software.

Tags: project, science, newbie, analysis, qgis

URI: /p/40

#### LizMap: Easy QGIS Maps Publication On The Web

René-Luc Dhont (3Liz)

Michaël Douchin (3Liz)

LizMap allows you to easily publish maps created with QGIS on the Web.

Tags: project, newbie, qgis

URI: /p/87

#### Session 29, Banqueting Suite

Friday 20th, 11:30 to 12:30

#### **Advanced GeoServer Security With GeoFence**

Mauro Bartolomeoli (GeoSolutions SAS)

Alessio Fabiani (GeoSolutions s.a.s.)

This presentation will provide an introduction to GeoFence, an open source tool to configure and use complex authorization rules to protect data served by GeoServer OGC services.

Tags: project, geoserver, under the hood

URI: /p/13

#### **State Of GeoServer**

Andrea Aime (GeoSolutions s.a.s.)

Justin Deoliveira (OpenGeo)

Get a summary of new features added to GeoServer in the last year in the 2.3 and 2.4 releases, and a glimpse of what we have planned for year 2014, straight from the core developers.

Tags: project, geoserver, new developments

URI: /p/149

#### Session 30, EMCC: Room 3

Friday 20th, 11:30 to 13:00

### A New Zealand Case Study: Open Source, Open Standards, Open Data

Brent Alexander Wood (NIWA)

The National Institute for Water and Atmospheric Research (NIWA) is New Zealand's leading agency providing freshwater, ocean, climate, atmosphere and fisheries related research. This presentation describes the role that open source software and open standards play in NIWA's strategies and architecture for environmental information management, discovery and delivery and gives

implementation examples.

Tags: academic,opendata,government,standards

**URI:** /p/9

### **Deploying A Open Source Web-GIS Within Warwickshire County Council**

Jonathan Moules (Warwickshire County Council)

This presentation presents a case study for how Warwickshire County Council replaced their proprietary web-GIS with an in-house developed deployment of Heron Mapping Client, with GeoServer for the backend. It will cover the entire process, from business case, through specification, extending Heron, technical "gotcha's", community participation, user feedback, evaluation of the project, and future

**Tags**: geoserver,government,casestudy

URI: /p/43

### Why Open Source GIS Is A Viable Option For The **Korean National GIS Program**

Sanghee Shin (Gaia3D, Inc.)

Byungnam Choe (Korean Research Institute of Human Settlements)

This presentation talks about the recent positive change in the Korean government's policy toward open source GIS, and its background rationale, by reviewing past investment in Korean GIS from 1995 to 2011 and related research reports on open source GIS adoption in Korea.

Tags: government,sdi

URI: /p/185

#### Session 31, EMCC: Room 1

Friday 20th, 11:30 to 13:00

#### Cartaro - The Geospatial CMS

Uli Müller (qeOps)

A New Kid on the Block: Bringing together Open Source Geospatial and Content Management Software

Tags: catalog,project

URI: /p/27

### CartoDB 2.1

Javier de la Torre (Vizzuality/CartoDB)

It has been an exciting year of development for CartoDB and its technologies - here we will report those updates and the lessons we have learned in the project's development.

Tags: project, showcase

URI: /p/28

#### Session 32, EMCC: Room 2

Friday 20th, 11:30 to 13:00

### iGUESS - The Good, The Bad And The Ugly Of **Developing A Distributed Modeling System For European Cities**

Chris Eykamp (CRP Henri Tudor) Luís de Sousa (CRP Henri Tudor) Ulrich Leopold (CRP Henri Tudor)

Challenges and lessons learned developing a generic, open, distributed modeling system based on OGC standards that allows users to configure and run models and visualize results using a web-based platform.

Tags: casestudy, standards, analysis

URI: /p/132

#### **VivaCity Smart City Platform**

Marco Montanari (MMo.IT)

An open source, open data usage and analysis platform for the Smart City.

Tags: opendata,3d,showcase

URI: /p/178

### ViziCities - Bringing Cities To Life Using Big Data And The Power Of The Web

Peter Smart ()

Rob Hawkes ()

We're using open big data to bring real world cities to life using WebGL and three.js.

Tags: bigdata,opendata,javascript

URI: /p/179

### Session 33, EMCC: Room 4

Friday 20th, 11:30 to 13:00

#### CDM & TDS Data Server: Earth & Ocean Sciences **Meet GIS**

Marcos Hermida Mera (Unidata/UCAR)

Ethan Davis (Unidata)

Lansing Madry (Unidata)

The Common Data Model and the THREDDS Data Server provide metadata and data access for scientific datasets using several remote data access protocols (OpeNDAP, NetCDF Subset Service, WMS, WCS) and have become an essential tool for interdisciplinary data sharing within the various domains of geosciences.

**Tags**: catalog,science,standards

URI: /p/30

#### Machine Learning For Remote Sensing: Orfeo ToolBox Meets OpenCV

Julien Michel (CNES (DCT/SI/AP))

Arnaud Jaen (CS SI)

Manuel Grizonnet (CNES (DCT/SI/AP))

A recent advance in the capabilities for remote sensing in Orfeo ToolBox has been the generic modelisation of machine learning algorithms now in OTB trunk. This enables encapsulation of algorithms from OpenCV in addition to those from libSVM, extending greatly the set of available algorithms and allowing for joint training of multiple algorithms for instance.

Tags: remotesensing

### **Open Source Software For Land Cover Mapping From Remote Sensing Data**

Pieter Kempeneers (VITO)

A case study on image classification using free and open source software as part of the IEEE IGARSS 2013 data fusion contest.

Tags: casestudy,remotesensing

URI: /p/114

### Session 34, Sir Clive Granger Building:

Friday 20th, 11:30 to 12:30

#### **Visualising 4D Weather Data**

Chris Little (Met Office)

Christine Perey (PEREY Research & Consulting) Mike Reynolds (Augmented Technologies Ltd)

WindAR demonstrates 4D gridded wind information, both actual and forecast, overlaid on a live video view on a mobile Android table.

Tags: showcase, visualisation

URI: /p/177

### WMS-V: A New Way To Visualise Geo-temporal

Tim-Hinnerk Heuer (Landcare Research Ltd, New Zealand) Andrew Cowie (Landcare Research Ltd, New Zealand) David Medyckyj-Scott (Landcare Research Ltd, New Zealand)

We have developed a new way of visualising geotemporal data, by extending the functionality of WMS and caching to produce video tiles/files which, using OpenLayers, can be viewed and interacted with as if they were 'maps'.

Tags: openlayers, standards, visualisation

URI: /p/187

### Session 35, Sir Clive Granger Building: **A41**

Friday 20th, 11:30 to 12:30

### **MapCache: The Fast Tiling Server From The MapServer Project**

Thomas Bonfort (Terriscope EURI)

MapCache is a fast and featureful library allowing webservers to efficiently serve and manipulate tiles, and transparently speedup access to existing WMS instances.

Tags: project,newbie

URI: /p/93

### **Vector Pyramids: A Multi-scale Vector Rendering And Processing Algorithm**

Mohammed Rashad (IIIT Hvderabad)

Krishnan Rajan (International Institute of Information

Technology)

Visualization of large spatial data is a complex process, and many GIS packages use their own assumptions or special storage formats to render quality data. This paper proposes a method for rendering Vector data, called Vector Pyramids,

that is designed to improve rendering and visual interpretation of large vector datasets.

Tags: academic, bigdata, visualisation, under the hood URI: /p/175

### Session 36, Sir Clive Granger Building: **A31**

Friday 20th, 11:30 to 12:30

### Data And Visualization Integration Via Web Based Resources

Massimo Di Stefano (Rensselaer Polytechnic Institute) We are developing infrastructure for collaboration and knowledge sharing for marine Integrated Ecosystem Assessments (IEAs), using IPython Notebooks as a tool for collaborative data processing, workflow provenance and product publishing.

Tags: project,python,analysis,visualisation

URI: /p/39

### **Interactive Visualisation Of The Energy Costs Of** Commuting

Robin Lovelace (University of Sheffield)

The energy impacts of commuting are large and highly variable over space, time and technology; this presentation will describe interactive methods for communicating this.

Tags: casestudy, visualisation

URI: /p/81

### Session 39, EMCC: Room 3

Friday 20th, 13:30 to 16:00

### Farm Maps Online: An Open Source Success In Norway.

Lars Aksel Opsahl (Norwegian Forest and Landscape Institute)

We present GPI, the primary application used to view and maintain information and geo-data of farms, farm geometries and farm properties throughout Norway - enabling farmers to create and update some farm data records themselves directly.

Tags: business, government, casestudy

URI: /p/50

#### **FOSS4G In Large-scale Projects**

Marko Turkovic (IGEA Itd.) Igor Bremec (IN2 Ltd.)

Tomislav Obad (Igea Ltd.)

The presentation covers experiences and challenges encountered during the implementation of the Kosovo Spatial Data Infrastructure. The SDI consists of GeoPortal, Cadaster and Land Information System and the Address Register, all implemented on the FOSS stack and interconnected via OGC services.

Tags: casestudy,sdi,portal

### GeoNetwork Opensource - The Geospatial Metadata Catalogue

Jeroen Ticheler (GeoCat BV)

The presentation will demonstrate the new functionality available in the latest release including INSPIRE support, performance, scalability, usability, workflow, metadata profile plugins and catalogue services compliance. Implementations highlighting several national European SDI portals developed in the context of the INSPIRE directive will be shown as well as work for Environment Canada.

Tags: catalog,project,showcase,sdi,geonetwork

URI: /p/61

#### **OpenWIS Opensource Software**

Jacques Roumilhac (Météo France)

The World Meteorological Organization's Information System (WIS) will soon become OpenWIS as open-source software, based on open-source components, with GeoNetwork, OpenAM, JBoss, Apache, Solr and PostgreSQL. OpenWIS fits the OGC and INSPIRE aspects, with OGC standard interfaces, and a portal service for discovery, search and request functions.

Tags: project,sdi,geonetwork

URI: /p/121

### The Right Approach: How Toscana Is Migrating To GFOSS

Paolo Cavallini (Faunalia)

The Tuscany Regional Administration is migrating its GIS infrastructure to open source software. In doing so, it took the right approach; working with the community, and contributing back substantial amounts of code, especially to the PostGIS and QGIS projects.

Tags: qgis,government,casestudy,postgis

URI: /p/162

#### Session 40, EMCC: Room 1

Friday 20th, 13:30 to 16:00

### Advanced Cartographic Map Rendering In GeoServer

Andrea Aime (GeoSolutions s.a.s.)

Alessio Fabiani (GeoSolutions s.a.s.)

Various software can style maps and generate a proper SLD document for OGC-compliant WMS. However the styling allowed by the graphical tools is often limited and not adequate for good cartographic output. This presentation will provide hints, examples and enough information to master SLD in order to create beautiful maps with GeoServer.

Tags: project, geoserver, visualisation, under the hood

URI: /p/12

### GeoCat Bridge - Publish From ArcGIS Desktop Into FOSS4G

Jeroen Ticheler (GeoCat BV) Hue Dang (GeoCat BV)

Jose Garcia (GeoCat BV)

GeoCat Bridge helps to bridge the gap between

proprietary and open source solutions. The goal of this product is to provide a solution that makes it extremely easy for users to publish their data on a GeoNetwork, GeoServer and/or MapServer-based server solution.

**Tags**: catalog,geoserver,showcase,mapserver

URI: /p/57

### Processing Data In GeoServer With WPS And SQL Views

Andrea Aime (GeoSolutions s.a.s.)

Alessio Fabiani (GeoSolutions s.a.s.)

The presentation is a brief introduction to GeoServer WPS capabilities, showing how to build processing requests based on existing processes, and how to build new processes leveraging scripting languages. It introduces unique GeoServer integration features, showing how processing can seamlessly integrate directly in the GeoServer data sources and complement existing services.

Tags: project,geoprocessing,geoserver,underthehood

URI: /p/131

### **Table Joining Service Implementation Using The GeoServer Platform**

José Luis Capote Fernández (GEOCUBA) Guillermo González Suárez (GEOCUBA)

Rafael Cruz Iglesias (GEOCUBA)

This article describes the implementation of the specification for Table Joining Service Service (TJS) of OGC as an extension to the GeoServer platform.

Tags: project, geoserver, under the hood

URI: /p/155

#### The Architecture Of Mobile Traffic Map Service

BJ Jang (Gaia3D Inc.)

Hayan Shin (Gaia3D Inc.)

Gaia3D Inc., will introduce not only the experience of implementing mobile traffic map service (as iPhone App, Android App, and Mobile Web Client) showing traffic on roads, streets, and highways at NTIC (National Transport Information Center) using Squid Proxy Server, GeoServer, and SQL Server, but also present the advanced architecture coming up in 2014.

Tags: project,3d,showcase,geoserver,mobile

### Session 41, EMCC: Room 2

Friday 20th, 13:30 to 16:00

### 3D Web Services And Models For The Web: Where Do We Stand?

Emmanuel Belo (Camptocamp SA)

Martin Christen (FHNW University of Applied Sciences Northwestern Switzerland)

Tom Payne (Camptocamp SA)

The aim of this talk is to sum up the standardization efforts (OGC and W3C) in defining 3D web services and models, as well as to show existing implementations to support the discussion.

Tags: 3d,casestudy,standards

URI: /p/2

#### A New Dimension To PostGIS: 3D

Olivier Courtin (Oslandia) Hugo Mercier (Oslandia)

We will show a Simple Features API on top of CGAL, bringing full 3D analysis functions to PostGIS.

Tags: postgis,project,3d,development,underthehood

URI: /p/7

#### Glob3 Mobile. A New Approach To Mobile GIS 3d.

Manuel de la Calle Alonso (Glob3 Mobile)

Agustín Trujillo Pino (ulpgc)

Diego Gómez-Deck (Glob3 mobile)

We have developed Glob3 Mobile - an open-source framework for developing 3d GIS mobile solutions with multi-platform support (iOS, Android, HTML5). It has raster, vector, 3d solid model and animation capabilities.

Tags: project,3d,mobile

URI: /p/71

### Management Of 3D City Models In PostGIS With The 3D City Database

Claus Nagel (virtualcitySYSTEMS) Felix Kunde (virtualcitySYSTEMS)

The award-winning 3D City Database is a free 3D geo database for virtual 3D city models on top of a standard spatial relational database. The database model contains semantically rich, multi-scale urban objects facilitating complex GIS modeling and analysis tasks.. It comes with additional software for data exchange and coupling with cloud services, and can export in KML and COLLADA formats for applications such as Google Earth, ArcGIS and ArcGIS Explorer.

Tags: 3d, visualisation, postgis

URI: /p/91

### Modelling 3D Underground Data In A Web-based 3D-Client

Till Adams (terrestris GmbH & Co KG) Emmanuel Belo (Camptocamp SA)

In the German federal state of Brandenburg geological borehole data, depth profiles and geological layer-data should be visualized in a 2D and 3D-based webclient. This talk will present the

technical solution based on PostGIS 2.0, GeoServer, OpenLayers, GeoExt2 on the 2D and ExtJs 4.x and X3Dom on the 3D-side.

**Tags**: 3d,casestudy,postgis,government,geoserver,openlayers

URI: /p/106

#### Session 42, EMCC: Room 4

Friday 20th, 13:30 to 16:00

### A New GIS Toolbox For Integrating Massive Heterogeneous GIS Data For Land Use Change Analysis

Birgit Laggner (Thünen-Institute of Rural Studies, Braunschweig)

Natascha Orthen (Thünen-Institute of Rural Studies, Braunschweig)

This presentation shows a selection of geoprocessing routines for which Open Source GIS software was used to summarize impacts of increased biogas production on agricultural land use change, highlighting the trend in biogas maize cultivation and the conversion of permanent grassland to agricultural cropland.

Tags: academic,bigdata,qgis,postgis

**URI:** /p/8

#### **ESA User Services Powered By Open Source**

Stephan Meissl (EOX IT Services GmbH)
Fabian Schindler (EOX IT Services GmbH)
Thomas Bonfort (Terriscope EURI)

This presentation introduces the Browse Server of the European Space Agency's new User Services infrastructure (ngEO), serving browse images via OGC's WMTS and WMS standards using GDAL, MapServer, EOxServer, and MapCache.

Tags: mapserver, portal, casestudy, remotesensing

URI: /p/47

### Implementation Of Standard Web Services For GOCE Data Exploitation

Marco Negretti (Politecnico di Milano - Campus Como) Daniele Sampietro (GReD s.r.l.)

Andrea Gatti (Politecnico di Milano DICA)

Mirko Reguzzoni (Politecnico di Milano DICA)

The European Space Agency (ESA) with the launch of the GOCE satellite made it possible to study the Earth's gravitational field and estimate the geoid with unprecedented accuracy and resolution on a global scale. In this work first results of the development of some OWS service (WPS, WMS and WCS) for spatiotemporal exploration and exploitation of GOCE and GEMMA (GOCE Exploitation for Moho Modeling and Applications) data is presented.

Tags: science, geoprocessing, remotesensing

URI: /p/77

### PyModis: The Python Library For MODIS Data

Luca Delucchi (Fondazione Edmund Mach)
Markus Neteler (Fondazione Edmund Mach)
pyModis is a Free and Open Source Python-based

library to work with MODIS data. It offers bulk downloads for user-selected time ranges, mosaicing of MODIS tiles, reprojection from Sinusoidal to other projections, and conversion of HDF format to other formats

**Tags**: python,remotesensing,showcase,development ,underthehood

URI: /p/134

### **Towards Big Earth Data Analytics: The EarthServer Approach**

Peter Baumann (Jacobs University)

EarthServer introduces distributed real-time analytics on Big Earth Data.

Tags: bigdata,remotesensing

URI: /p/167

### Session 37, Auditorium

Friday 20th, 14:00 to 16:00

### **Esri: Going Open With GitHub**

Allan Laframboise (Esri)

Esri hosts over 80 public code repositories on GitHub, extending across a wide range of disciplines and technologies from full client-server Government solutions to specific geo-utility tools to ArcGIS products, components and solutions. This session covers how Esri embraced GitHub for sharing geo projects both across the organization and to the public domain, the implementation strategy, the technical challenges faced, and why others might want to consider adopting GitHub for their organizations as well.

Tags: business URI: /p/48

#### **Technological Innovation With Open Source**

Manuel Haro Márquez (National Open Source Laboratory, Zacatecas State Goverment)

In the knowledge age, where technology is a development platform for countries, is important to create strategies which exploit scientific and technological developments for knowledge appropriation, and boost creativity and innovation to create collaborative communities and guarantee technological sovereignty and open innovation. Today open source, with its freedoms and robust solutions, is the best approach, tending towards the I+D+I2 paradigm (Investigation + Development + Innovation + Inversion).

Tags: business, newbie

URI: /p/157

#### The Importance Of Open Source Geospatial Labs **In Widening Geospatial Education Worldwide**

Suchith Anand (University of Nottingham) Charlie Schweik (University of Massachusetts) Helena Mitasova (North Carolina State University)

This paper describe the experiences learned in the establishment of the ICA-OSGeo Lab Network to help spread geospatial science education worldwide. Tags: business, newbie, education

URI: /p/160

#### **Using Spatial Business Intelligence For Asset** Management

Niels Hoffmann (Provincie Noord-Holland)

In this presentation I demonstrate the use of Spatial OLAP for better asset management of provincial waterways.

Tags: government, casestudy, analysis

URI: /p/174

### Session 38, Banqueting Suite

Friday 20th, 14:00 to 16:00

#### A Future Perspective On The Sensor Web

Anton Bakker (GeoCat bv)

A presentation of the current status of a Sensor Web Enablement (SWE) based "Sensor Web" and a future perspective. As an example an application will be presented that integrates sensor data with data from an existing spatial data infrastructure.

Tags: sensorweb, showcase

URI: /p/5

#### An API For Visualizing Data From The Sensor Web

Simon Jirka (52°North GmbH) Henning Bredel (52°North GmbH) Jan Schulte (52°North GmbH)

In this presentation a library for facilitating the development of OGC Sensor Observation Service (SOS) clients will be introduced that hides all complex interactions with the SOS interface by providing a simple, lightweight API based on REST and JSON.

Tags: sensorweb

URI: /p/16

### istSOS: A Comprehensive User Friendly Monitoring Data System; Release 2.0 And Latest **Enhancements**

Massimiliano Cannata (Istituto scienze della Terra - SUPSI) Milan Antonovic (Istituto scienze della Terra - SUPSI)

This presentation will show the latest software enhancements of istSOS, including a RESTful API and a web interface to administration functions for easy management.

Tags: project, sensorweb, showcase, development

URI: /p/83

### Semantically Enriching An Open Source SOS Implementation For Accessing Heterogeneous **Environmental Data Sources**

Desiree Hilbring (Fraunhofer Institute of Optronics, System Technologies and Image Exploitation)

Anastasia Moumtzidou (Centre for Research and Technology, Hellas)

Jürgen Moßgraber (Fraunhofer Institute of Optronics, System Technologies and Image Exploitation)

Stefanos Vrochidis ()

Many kinds of environmental data are nowadays publicly available, but spread over the web. This

paper discusses using the Sensor Observation Service (SOS) standard of the OGC as a common interface for providing data from heterogeneous sources which can be integrated to a user-tailored environmental information system.

Tags: academic,sensorweb,standards,portal

URI: /p/143

### Session 43, Sir Clive Granger Building: A39

Friday 20th, 14:00 to 16:00

### AEGIS - A State-of-the-art Component-based Spatio-temporal Framework

Roberto Giachetta (Eötvös Loránd University)

This article presents the AEGIS framework, a platform for representing spatio-temporal raster and vector data storage, management, and highly scalable distributed processing. Two case studies are presented.

Tags: academic,project,education,remotesensing

URI: /p/14

### Evaluating Open Source GIS Techniques For Addressing Database, Analysis And Visualization Aspects Of Spatiotemporal Information

Lynnae Sutton (Fish Passage Center) Jackie Olsen ()

By identifying the characteristics of the spatial, temporal and attributional dimensions, we evaluate, compare and contrast OSGIS techniques for data storage, retrieval, pattern analysis and visualization of spatiotemporal data. Some of the open source software evaluated includes: Weave, timemap. js, Dojo.js, QGIS temporal extension, OpenLayers Tracking, D3 and i2maps.

Tags: qgis,javascript,openlayers,development,under

thehood URI: /p/49

#### **GRASS As Temporal GIS**

Sören Gebbert (THÜNEN Institute of Climate-Smart Agriculture)

An introduction to the new spatio-temporal capabilities of GRASS GIS that transform it into a comprehensive temporal GIS.

Tags: project, development

URI: /p/73

### **GeoServer for Spatio-temporal Data Handling With Examples For MetOc And Remote Sensing**

Daniele Romagnoli (GeoSolutions s.a.s.) Simone Giannecchini (GeoSolutions S.A.S.)

This presentation will provide detailed information on how to ingest and configure spatio-temporal data in GeoServer, to be served using OGC services, with examples from WMS and WCS services.

Tags: project, geoserver, under the hood

URI: /p/147

### **Session 44, Sir Clive Granger Building:** A41

Friday 20th, 14:00 to 16:00

### Optimising Spatial Data Analysis With PostgreSQL And PostGIS

Gianni Ciolli (2ndQuadrant)

Simon Riggs (2ndQuadrant)

We describe the solution of some PostGIS problems, demonstrating relevant PostgreSQL features which include: GiST and SP-GiST index types; custom database objects; query and workload profiling.

**Tags**: project,postgis,development,underthehood

URI: /p/122

#### **PostGIS Feature Frenzy**

Paul Ramsey (OpenGeo)

What can you do with this PostGIS thing? This talk covers some basic and notsobasic ways to use PostGIS/PostgreSQL to process spatial data, to build infrastructures, and to do crazy things with data.

Tags: project, newbie, postgis

URI: /p/129

#### PostMap - The PostGIS Web Client

Jan Jezek (Univerzity of West Bohemia in Pilsen)
Michal Kepka (University of West Bohemia in Pilsen)
Introduction of a lightweight web-based application for PostGIS queries visualisation.

Tags: project, showcase, newbie, postgis

URI: /p/130

### **Session 45, Sir Clive Granger Building:** A31

Friday 20th, 14:00 to 16:00

### Session 46, Auditorium

Saturday 21st, 09:00 to 10:30

#### GeoPackage, The Shapefile Of The Future

Pirmin Kalberer (Sourcepole)

GeoPackage is an OGC candidate standard combining vector data and raster tiles in a single database file.

Tags: project, standards

URI: /p/62

#### pycsw: Metadata Publishing Just Got Easier

Angelos Tzotsos (OSGeo Charter Member) Jeff McKenna (Gateway Geomatics)

Tom Kralidis (OSGeo Charter Member)

pycsw is an OGC-compliant CSW server implementation written in Python, enabling publishing and discovery of geospatial metadata, providing a standards-based metadata and catalogue component of spatial data infrastructures.

**Tags**: catalog,project,geoprocessing,python,newbie

# Using Free And Open Source GIS To Automatically Create Standards-Based Spatial Metadata In Academia

Claire Ellul (University College London)

Nart Tamash ()

Feng Xian (University College London)

John Stuiver (Laboratory of GeoInformation Science and Remote Sensing, University of Wageningen) Patrick Rickles (University College London)

This talk describes an approach to address issues of complexity in metadata creation and maintenance in an academic context by tightly coupling data and metadata, and automating elements of standards-based metadata creation. We describe research into the potential of Quantum GIS and PostGIS to support this form of metadata generation and maintenance.

Tags: academic,catalog,standards,portal

URI: /p/171

### Session 47, Banqueting Suite

Saturday 21st, 09:00 to 10:30

### Opening Up Access To Geological Data With Rasdaman Based WCS And WCPS Services

J Passmore (British Geological Survey)

As part of EarthServer, an ongoing e-Infrastructure EU-FP7 project, the British Geological Survey is investing in the development of Web Coverage Services (WCS) and Web Coverage Processing Services (WCPS), built on open source Rasdaman and Petascope software in a bid to make 100TB of geological data readily available to the geoscience data user community of scientific users, stakeholders such as exploration companies, civil engineers, local authority planners, and the general public.

Tags: bigdata, science, hacks/mashups, opendata

URI: /p/116

### OS Geospatial Technologies + Science Data For Evidence-Based Decision Making

David Medyckyj-Scott (Landcare Research Ltd, New Zealand)

Nick Spencer (Landcare Research Ltd, New Zealand) Robert Gibb (Landcare Research Ltd, New Zealand)

We will describe how Landcare Research, a Crownowned company that carries out environmental research for the benefit of New Zealand, has been using open source geospatial software and open standards to provide access to data and tools to support decision making by industry, central and local government, and M ori.

Tags: government, casestudy

URI: /p/123

#### **Using FOSS4G Software For Flight Planning**

Blake Crosby ()

World Flight Planner is an open source solution to flight planning for pilots. It uses FOSS4G software to process complex weather data, to parse and plot aeronautical information and real time pilot reports on a map, and show non-pilots the steps involved in pre-flight planning.

Tags: casestudy URI: /p/170

#### Session 48, EMCC: Room 3

Saturday 21st, 09:00 to 10:30

### MapProxy - Past, Present, Future

Oliver Tonnhofer (Omniscale)

How MapProxy evolved from a simple tile cache software to a powerful and flexible proxy solution for maps, and what new features are ahead.

Tags: project, showcase

URI: /p/99

### Storing, Querying, And Mapping Global Collection Of Night-time Light Data With Open Source GIS Software

Qing Liu (University of Denver)

The goal of this project is to store the global collection of night-time light data products in a queryable raster format in PostgreSQL; to develop a web application for the visualization of and application of seamless interactive vector/raster queries on the light data; and to develop an API for developers to query and retrieve light data to feed their own applications.

Tags: project, visualisation

URI: /p/151

### Working With Spatial Databases With GeoAlchemy

Eric Lemoine (Camptocamp SA)

GeoAlchemy is a powerful toolkit for working with SQL spatial databases with Python. The latest version (2) will be presented, as well as integration with PostGIS and Shapely.

Tags: python,development,underthehood

URI: /p/188

### Session 49, EMCC: Room 1

Saturday 21st, 09:00 to 10:30

### **Concurrent Online Webgis: A New Way To Map Together**

Steven M. Ottens (Geodan Research)

Tom van Tilburg (Geodan Research)

A new way to share geodata in real time to create collaborative maps, using new HTML5 techniques like websockets and IndexedDB.

Tags: development, project, standards, under the hood

#### **SVG Map - Tile Map Without Javascript**

Taro Matsuzawa (Georepublic Japan)

Ko Nagase (Georepublic Japan)

SVG Map implements specific elements and attributes that enable internet browsers to display map tiles directly through the browser's layout engine, supporting dynamic tiling and layering.

Tags: project, visualisation, standards, under the hood

URI: /p/153

### Tiles And More - Deegree Freshly Implements WMTS

Sebastian Goerke (lat/lon GmbH)

In 2013, a new service type joined the deegree family - the deegree Web Map Tile Service. This deegree service implements the OGC WMTS 1.0.0 specification and is going to be the OGC reference implementation for this specification. Both the OGC WMTS test suite and deegree's candidate reference implementation have been developed within the OGC OWS-9 initiative.

Tags: project, showcase, standards

URI: /p/164

#### Session 50, EMCC: Room 2

Saturday 21st, 09:00 to 10:30

#### **Mappy-ng Open Source**

Audrey Malherbe (MAPPY)

Feedback on the overhaul of the mapping engine of Mappy around Mapnik and PostGIS.

Tags: project, postgis, visualisation, under the hood

URI: /p/100

### **Open Source In Accessibility Analyses**

Stefan Neumeier (Johann Heinrich von Thünen-Institut) We present research on accessibility to core local services (petrol stations) as an important factor for regional development and infrastructure in Germany. As well as a GIS analysis of station accessibility, we also reviewed the usability of OpenStreetMap for routing networks, using PostGIS and a Perl Graph package.

Tags: academic, standards, sdi, postgis

URI: /p/113

### Taming Rich GML With stETL, A Lightweight Python Framework For Geospatial ETL

Just van den Broecke (Just Objects B.V.)

stETL, Streaming ETL, is a lightweight, geospatial ETL-framework written in Python, integrating transformation tools like GDAL/OGR, XSLT and PostGIS. stETL targets ETL cases that involve XML and GML data, like INSPIRE data harmonization, but other transformations, even non-geospatial, can also be made. stETL applies declarative programming: a configuration file specifies an ETL chain of input/filter/output modules. stETL uses native calls to C-level libraries for speed.

Tags: catalog,project,showcase,postgis

URI: /p/156

### Session 51, EMCC: Room 4

Saturday 21st, 09:00 to 10:30

### GeoHashTree, A Multi-resolution Data Structure For Managing Point Clouds In PostgreSQL

Nouri Sabo (Natural Resources Canada)

Natural Resources Canada's new elevation data management system includes a novel hierarchical data structure, the GeoHashTree, for managing point clouds and other types of elevation data. It is a component of POINTPACH, the new extension for the management of point clouds in PostgreSQL. We will explain the system architecture and the new data structure together with the results of tests conducted with the GeoHashTree.

Tags: government, casestudy, under the hood

URI: /p/60

#### LIDAR In PostgreSQL With Pointcloud

Paul Ramsey (OpenGeo)

Features and use cases of new LIDAR support for PostgreSQL.

Tags: project, remotesensing

URI: /p/86

#### **PDAL: It Rhymes With GDAL**

Michael Smith (US Army Corps of Engineers)

PDAL is a BSD-licensed library for translating and manipulating point cloud data of various formats, analogous to the GDAL raster library.

Tags: development, under the hood

URI: /p/126

### Session 52, Sir Clive Granger Building: A39

Saturday 21st, 09:00 to 10:30

#### **Analysis Of Realtime Stream Data With Anvil**

Andrew Turner (Esri)

Christopher Helm (Esri)

Stefan Novak (Esri)

This talk will present Anvil, an open-source realtime stream-processing fabric that makes it possible to connect, georeference, analyze, and visualize highrate data.

**Tags**: bigdata,project,geoprocessing,visualisation

URI: /p/18

#### **OpenLayers 3 Showcase**

Tom Payne (Camptocamp SA)

Eric Lemoine (Camptocamp SA)

Cool demonstrations of how OpenLayers 3 opens up new possibilities for presenting your geospatial data.

Tags: project, openlayers, newbie

URI: /p/118

### Real-time Data Analysis And Rendering With HTML5 Canvas Using OpenLayers And GeoServer

Tom Kunicki (U.S. Geological Survey)
Dave Blodgett (U.S. Geological Survey)

The emergence of HTML5 Canvas support in browsers creates an opportunity to shift rendering

and analysis tasks from the serverside to the client web browser. Sample implementations will be presented that take advantage of an OpenLayers HTML5 canvas raster pipeline, using data vended by GeoServer using WPS and WMS, coupled with SLD rendering transforms and an integrated WMS tile cache.

**Tags**: project, standards, development, under the hood

URI: /p/140

### **Session 53, Sir Clive Granger Building:** A41

Saturday 21st, 09:00 to 10:30

### **GraphGIS, Bringing Spatial Functionalities To NoSQL Graph Databases**

Frédéric Houbie (Geomatys)

Vincent Heurteaux (Geomatys)

We have developed GraphGIS, a spatial cartridge for OrientDB, the graph-oriented NoSQL database. This provides support for geographic vector, raster and sensor data, in multiple dimensions with associated metadata.

Tags: development, under the hood

URI: /p/72

### Lucene Spatial - The Forgotten NOSQL Spatial Datastore

Steven Citron-Pousty (Red Hat)

This talk will cover all the cool things you can do with Lucene/Solr spatial.

Tags: development, under the hood

URI: /p/89

### Using NoSQL & HTML5 Libraries To Rapidly Generate Interactive Web Visualisations Of Highvolume Spatio-temporal Data

Jack Harrison (Ordnance Survey)

The challenges and successes in implementing real-time, browser-based social media analysis and visualisation with open source tools.

Tags: casestudy, visualisation

URI: /p/172

### Session 54, Sir Clive Granger Building: A31

Saturday 21st, 09:00 to 10:30

### **Coordinate Reference System Challenges In GeoScience Modelling**

Mark Hedley (Met Office)

Addressing the challenges of coordinate reference system support for geosciences modellers: do Well Known Text, Proj4 and EPSG deliver?

Tags: project, science, under the hood

URI: /p/34

### Coordinate Systems: PROJ.4, EPSG and OGC WKT

Frank Warmerdam (Google)

A practical review of coordinate systems.

Tags: development, under the hood

URI: /p/35

#### **Old Maps Online And Georeferencer**

Petr Pridal (Klokan Technologies GmbH)

Vaclav Klusak ()

How to turn scanned maps into an attractive discoverable resource.

Tags: catalog,casestudy

URI: /p/109

#### Session 55, Auditorium

Saturday 21st, 11:00 to 12:30

#### **Geospatial Github**

Christopher Helm (Esri)

A whimsical exploration of the best geospatial code repositories on Github.

Tags: lighthearted

URI: /p/65

### Inside GeoGit: Decentralized Versioning Of Geospatial Data For Developers.

Gabriel Roldán (OpenGeo)

Victor Olaya (OpenGeo)

An introduction to the technical ideas behind GeoGit, for developers and advanced users

Tags: project, development, under the hood

URI: /p/79

### Introduction To GeoGit: Distributed Versioned Editing For Geospatial Features

Scott Clark (LMN Solutions, LLC)

Chris Holmes ()

GeoGit is a new open source software project that is designed to allow for multiple individuals to contribute to geospatial feature data while providing versioning, provenance, and support for collaborative workflows.

Tags: project, showcase, newbie

URI: /p/82

#### Session 56, Banqueting Suite

Saturday 21st, 11:00 to 12:30

### **Communicating Data Quality Through Web Map Services**

Jon Blower (University of Reading)

Charles Roberts (University of Reading)

Guy Griffiths (University of Reading)

We shall demonstrate new developments in using Web Map Services to communicate data quality at the level of datasets, variables and individual samples, using a new set of conventions ("WMS-Q") and prototype software.

Tags: showcase, standards

#### WCS And EO-WCS Status In Open Source

Stephan Meissl (EOX IT Services GmbH)

Andrea Aime (GeoSolutions s.a.s.)

Simone Giannecchini (GeoSolutions S.A.S.)

This presentation will show the current status of open source implementations of WCS, and particularly EO-WCS, by comparing GeoServer and MapServer/ EOxServer.

Tags: mapserver, geoserver, standards, development

URI: /p/181

### **ZOO-Project 1.3.0: The WPS Developing Environment**

Gérald Fenoy (GeoLabs)

This session describes the new functionalities which are available in the 1.3.0 version of ZOO, and what's coming up in future releases.

**Tags**: project, showcase, development

URI: /p/189

### Session 57, EMCC: Room 3

Saturday 21st, 11:00 to 13:00

### MapServer Project Status Report - Meet The Developers!

Daniel Morissette (Mapgears)

Thomas Bonfort (Terriscope EURI)

This session starts with a status report of the MapServer project, followed by an open question/ answer session to provide a opportunity for users to interact with members of the MapServer project team.

Tags: project, mapserver, development

URI: /p/102

#### **MapServer REST API**

Guillaume Sueur (Neogeo Technologies)

Presentation of a REST API for MapServer, including a live demo of managing a mapfile content with HTTP requests.

Tags: project, showcase, development, mapserver

URI: /p/103

#### Migration To Open Source Database Systems.

Age Nielsen (Danish Geodata Agency)

Jonas Lund Nielsen (Danish Geodata Agency)

The Danish Geodata Agency has changed a major part of its data distribution to open source databases and services, PostGIS, Mapserver and Geoserver. Experiences are positive. Performance and stability are comparable to commercial systems.

**Tags**: casestudy,sdi,postgis,government,geoserver,m apserver

URI: /p/104

### Scribe: MapServer Mapfile Development Made Easy

Julien-Samuel Lacroix (Mapgears)

Scribe helps you edit and manage large MapServer mapfiles easily.

Tags: project, showcase, mapserver, hacks/

mashups,newbie URI: /p/142

### Session 58, EMCC: Room 1

Saturday 21st, 11:00 to 13:00

### Fast Tiling And Presentation Of TB's Aerial Image Data

Herman Assink (IDgis B.V.)

Erik Orbons (IDgis bv)

A solution is presented for serving 10cm resolution aerial images covering the whole Netherlands. The resulting 8 billion tiles are stored in a NoSQL database and served by a dedicated TMS&WMTS service for fast delivery to clients.

Tags: casestudy,remotesensing

URI: /p/51

#### **Faster Rasters For All**

Graeme Bell (Norsk Institutt for Skog og Landskap)

The Norwegian Forest and Landscape geomatics group works with national-scale agricultural data, and as part of a recent project, we have developed some tools & techniques that significantly improve performance with open source GIS tools that we want to share with the community.

Tags: hacks/mashups,government,casestudy

URI: /p/52

### Raster Data In GeoServer And GeoTools: Achievements, Issues And Future Developments

Simone Giannecchini (GeoSolutions S.A.S.)

Daniele Romagnoli (GeoSolutions s.a.s.)

The purpose of this presentation is to discuss the developments during last year in raster data support in GeoTools and GeoServer, and also to introduce and discuss future development directions.

Tags: project, geoserver, remotesensing

URI: /p/139

#### **TileServer: Hosting Map Tiles And MBTiles**

Petr Pridal (Klokan Technologies GmbH)

TileServer, a new open source software project, is able to serve maps from ordinary web hosting, and provide an efficient OGC WMTS-compliant map tile service for pre-rendered maps. It is an extremely fast, free and open-source for pre-rendered tiles running on any web server.

Tags: project URI: /p/165

### Session 59, EMCC: Room 2

Saturday 21st, 11:00 to 13:00

### Water Quality Forecast And Information System Built With FLOSS Software

Vasile Cr ciunescu (Romanian National Meteorological Administration)

The CLEANWATER system combines information to evaluate the present level of nutrient pollution in vulnerable areas, and assesses the cost efficiency of measures that could be applied. A web interface gives decision makers a tool to create scenarios related to human activities and climate changes, send them to numerical models, and view, query and analyse the results. The system is built entirely with standard-compliant FOSS applications like OpenLayers, ExtJS, PostGIS, GeoServer and GDAL.

**Tags**: casestudy,postgis,geoserver,newbie,openlayer s,hacks/mashups

URI: /p/180

### Web Processing Services Using OS OpenData

Hugo Martins (Lutra Consulting)

Using OS OpenData, applying OGC standards and services, and customising a number of open source GIS tools, a WebGIS app was developed to provide a simple and intuitive online tool for generating hydrological catchments within the UK.

Tags: geoprocessing, development

URI: /p/182

### WebGIS Applications For The New Generation Of Hydrological Models

Claudia Vitolo (Imperial College and Lutra Consulting) Peter Wells (Lutra Consulting)

Developed to address the limitations of existing hydrological desktop applications, OASIS-WS utilises the latest advances in web technologies and data availability to inform key decision makers of the impacts of land management on water resources and flood risk, through a robust and consistent webbased approach.

Tags: business, casestudy

URI: /p/184

### Session 60, EMCC: Room 4

Saturday 21st, 11:00 to 13:00

#### **Leaflet: Past, Present, Future**

Vladimir Agafonkin ()

Leaflet is now the most popular open source solution for publishing maps on the Web. What's the story behind Leaflet? How did it became so successful so quickly despite strong competition and lack of features? This talk will be presented by its lead developer and will cover lessons learned, the current state of the project and future challenges.

Tags: project, showcase, development

URI: /p/85

### Mapbender3 - Create Your Own Geoportal Web Application And Service Repository

Astrid Emde (WhereGroup, Mapbender Team)
Olaf Knopp (WhereGroup, Mapbender Team)

Get to know the web-based geoportal framework Mapbender3 to administrate and view spatial services.

Tags: project,portal,newbie

URI: /p/92

#### **MapFish Framework**

Elisabeth Leu (Camptocamp SA) Claude Philipona (Camptocamp SA) Emmanuel Belo (Camptocamp SA)

The presentation gives a general overview of the MapFish Web GIS Framework and demonstrates its possibilities with the c2cgeoportal implementation.

Tags: project, development

URI: /p/95

### Open Source Web And Mobile Mapping Applications In Utilities And Telcos

Peter Batty (Ubisense)

This presentation will discuss enterprise web mapping applications that we've been developing for large utilities and communications companies, based on a number of open source geospatial components including PostGIS, MapFish, GeoServer and Leaflet, and including a case study on how this helped with recovery from Hurricane Sandy.

**Tags**: casestudy,leaflet,mapfish,postgis,geoserver,ha cks/mashups

URI: /p/115

### **Session 61, Sir Clive Granger Building:** A39

Saturday 21st, 11:00 to 12:30

### **Application Development With OpenLayers 3**

Tim Schaub (OpenGeo)

OpenLayers 3 is here! Now it's time to learn how to build great mapping apps with it.

Tags: newbie,openlayers,project

URI: /p/19

### OpenLayers 3 - How To Successfully Run A Crowdfunding Campaign For An OSS Project

Cédric Moullet (swisstopo)

In order to create the third release of OpenLayers, an important crowdfunding effort was organized by the OpenLayers community in 2012 and was able to collect 350,000USD for the development of this new release. This presentation will present the key findings of this effort.

Tags: business,project,openlayers

#### **OpenLayers 3: Under The Hood**

Tom Payne (Camptocamp SA) Eric Lemoine (Camptocamp SA)

A technical exploration OpenLayers 3's architecture, explaining how to use the new features and functionality of this next-generation mapping software.

Tags: project, openlayers, under the hood

URI: /p/119

### Session 62, Sir Clive Granger Building: A41

Saturday 21st, 11:00 to 12:30

### GeoCouch: An N-dimensional Index For Apache CouchDB And Couchbase

Volker Mische (Couchbase)

We present GeoCouch, an extension for the document databases Apache CouchDB and Couchbase to query them with n-dimensions.

Tags: project, development

URI: /p/58

### Getting The Best Performance For GeoJSON Map Visualizations: PostGIS Vs CouchDB Backend

Luca Morandini (University of Melbourne) Martin Tomko (University of Melbourne) Richard Sinnott (University of Melbourne)

Rich user experiences call for JSON data, but what combination of DBMS, compression, generalization, etc. can deliver the best performance on the client? During the course of this presentation we will present our findings, showing how we collected test data and built statistical models to gauge the contribution of each factor (DBMS, compression, etc.) to the overall performance.

Tags: development, under the hood

URI: /p/67

### **Polyglot Spatial With MongoDB**

Steven Citron-Pousty (Red Hat)

MongoDB has spatial capabilities, perfect for 'checkin' type services. I will show how to use it with Python, Java, and Node.JS for a REST-based web service.

**Tags**: python,javascript,development,underthehood

URI: /p/128

# Session 63, Sir Clive Granger Building: A31

Saturday 21st, 11:00 to 12:30

# GIS For All: Exploring The Barriers And Opportunities For Underexploited GIS Applications

Hao Ye (Nottingham Geospatial Institute, University of Nottingham)

Michael Brown (Horizon Digital Economy Institute, University of Nottingham)

Jenny Harding (Ordnance Survey)

We will explore the barriers that affect the utilisation

of GIS and opportunities to overcome these barriers. Using questionnaire and interview techniques we identified ways forward for future research and development to facilitate more widespread adoption and exploitation of GIS applications, and the importance of openness in this.

Tags: academic, opendata, cloud

URI: /p/69

### How To Create A Geocoded Town - Monmouthpedia And Gibraltarpedia

Roger Bamkin (Victuallers)

John Cummings (Monmouthpedia)

Monmouthpedia and Gibraltarpedia are towns that have hundreds of geocoded Wikipedia articles. The authors have liased with communities, businesses, universities, PhD students, media to create these places in augmented reality and in the real world.

Tags: newbie, showcase, education

URI: /p/76

### **Using OSGeo Live In MSc Teaching**

Jeremy Morley (Nottingham Geospatial Institute, University of Nottingham)

OSGeo Live provides a valuable "system in a box" for MSc teaching in GIS, particularly for creating and managing GIS web services. This presentation will reflect on my experience of using the OSGeo Live system (versions 5.0 and 6.0) for delivering practical class teaching of GIS at Masters level.

Tags: newbie,education

URI: /p/173

### Session 64, EMCC: Room 3

Saturday 21st, 13:30 to 14:00

#### **Gamification In GIS**

Doh Kyoung Tae (OSGeo Korea)

Introducing a simple GIS gamification service using 30 pen Layers and node Map.

Tags: project, development

URI: /p/55

### Session 65, EMCC: Room 1

Saturday 21st, 13:30 to 14:00

#### Space, Place And Psychogeography

Tim Waters (Topomancy)

An introduction to psychogeography, and how it can shed a new light on space and place and its relevance to our geospatial work.

Tags: lighthearted, education

#### Session 66, EMCC: Room 2

Saturday 21st, 13:30 to 14:00

### GIS Is Not Dead, It's Coming For You And It's Been Drinking JavaScript

Christopher Helm (Esri)

This talk will discuss several super kick-ass ways that JavaScript and the web have re-shaped GIS and are changing how we visualize, analyze and share geospatial data with each other and the world.

Tags: lighthearted, javascript, showcase

URI: /p/70

#### Session 67, EMCC: Room 4

Saturday 21st, 13:30 to 14:00

#### **Qualifying For Open Source**

Arnulf Christl (metaspatial)

An explanation of the new Certification and Accreditation Program for professionals in open source geospatial.

Tags: business URI: /p/138

### **Booked Workshops**

### Sept. 17, 2013

Start	End	Duration	Sir Clive Granger Building B26 E	Sir Clive Granger Building B29 A	Sir Clive Granger Building B29 B	Trent B16	Hallward Library
9:30	11:30	2:00	W2	W17	18/47	W12	W1
11:30	13:30	2:00	W3				-
13:30	14:00	0:30	Lunch		W4	Lunch	
14:00	16:00	2:00	W/40	W14		1444	W40
16:00	18:00	2:00	W18			W11	W13

### W17: A complete open source web mapping stack (Introduction to the OpenGeo Suite) (40 delegates)

Jeffrey Johnson (OpenGeo)

Sir Clive Granger Building: B29 A - Sept. 17, 2013, 9:30 a.m. to Sept. 17, 2013, 1:30 p.m.

Would you like to learn how to get started building an online mapping system? This workshop will introduce attendees to the components of a complete, open-source web mapping solution. The course will include an introduction to spatial analysis with PostGIS, loading and serving data with GeoServer, map optimization with GeoWebCache, styling with SLD, composing and publishing maps with GeoExplorer, and creating your own web map applications with OpenLayers and GeoExt.

#### W12: PostGIS 3D Workshop (48 delegates)

Olivier Courtin (Oslandia)

Trent B16 - Sept. 17, 2013, 9:30 a.m. to Sept. 17, 2013, 1:30 p.m.

This workshop aims to demonstrate the ability to setup and play with a full FOSS4G 3D stack, based on latest PostgreSQL/PostGIS database 3D enhancements (with CGAL backend), 3D open datas and (WeblOpen)GL renderers.

### W4: Impact Modelling with OpenStreetMap and InaSAFE (40 delegates)

Kate Chapman (Humanitarian OpenStreetMap Team) with Kristen Van Putten

Sir Clive Granger Building: B29 B - Sept. 17, 2013, 9:30 a.m. to Sept. 17, 2013, 6 p.m.

To prepare contingency plans for a city at risk of severe flooding, emergency managers need to

answer the following questions: \* Which areas are most likely to be affected? \* How many people will need to be evacuated and sheltered? \* Which schools will be closed? \* Which hospitals can still take patients? An open source solution to this geospatial problem is the combination of OpenStreetMap, QuantumGIS and InaSAFE.

### W2: Quantum GIS in action (30 delegates)

Paolo Cavallini (QGIS-PSC)

Sir Clive Granger Building: B26 E - Sept. 17, 2013, 9:30 a.m. to Sept. 17, 2013, 11:30 a.m.

An introduction to QGIS and all the cool new stuff in it.

### W1: OSM-GB Services and Data Workshop (20 delegates)

Amir Pourabdollah (The University of Nottingham)

Hallward Library: LG101 - Sept. 17, 2013, 9:30 a.m. to Sept. 17, 2013, 11:30 a.m.

OSM-GB (http://www.osmgb.org.uk) is a project that redelivers a thematic quality-controlled version of OpenStreetMap in OGC Web Services in the context of Great Britain. This workshop will be a chance to explore this project.

### W3: Using CartoDB to map real-time data (30 delegates)

Javier de la Torre (CartoDB)

Sir Clive Granger Building: B26 E - Sept. 17, 2013, 11:30 a.m. to Sept. 17, 2013, 1:30 p.m.

CartoDB is an open-source tool for mapping and building apps around dynamic data. We will show you how to use CartoDB to build maps, and to use the maps to explore dynamic data.

### W18: Introduction to Mobile Web Development Using FOSS4G (30 delegates)

Krisztian Olle (Envitia)

Sir Clive Granger Building: B26 E - Sept. 17, 2013, 2 p.m. to Sept. 17, 2013, 6 p.m.

This workshop will focus on the implementation of a number of open source tools such as Geoserver, PostGIS, Tomcat, Dojo Mobile and OpenLayers Mobile to develop a mobile web mapping application.

### W14: FOSS4G routing with pgRouting, OpenStreetMap road data and OpenLayers 3 (55 delegates)

Hal Seki (Georepublic Japan) with Yves Jacolin

Sir Clive Granger Building: B29 A - Sept. 17, 2013, 2 p.m. to Sept. 17, 2013, 6 p.m.

This introductory workshop will show you how pgRouting adds routing functionality to PostGIS.. It gives a practical example of how to use the new pgRouting release with OpenStreetMap road network data.

### W11: Managing Versioned Data with GeoGit (48 delegates)

David Winslow (OpenGeo)

Trent B16 - Sept. 17, 2013, 2 p.m. to Sept. 17, 2013, 6 p.m.

GeoGit is a new geospatial data storage tool implementing a decentralized version control system (DVCS.) In this workshop, we'll walk through core procedures in managing version history and interoperating with preexisting spatial software tools.

### W13: deegree: Setting up interoperable INSPIRE Download Services in 3 hours (30 delegates)

Markus Schneider (Occam Labs)

Hallward Library: LG101 - Sept. 17, 2013, 2 p.m. to Sept. 17, 2013, 6 p.m.

Take this workshop to learn the requirements and the implementation of compliant INSPIRE Download Services using FOSS packages.

#### Sept. 18, 2013

Start	End	Duration	Sir Clive Granger Building B26 E	Sir Clive Granger Building B29 A	Sir Clive Granger Building B29 B	Trent B16	Hallward Library
9:30	11:30	2:00	WIIG	W8	W6		W10
11:30	13:30	2:00	W16	VVO	VVO		WIO
13:30	14:00	0:30	Lunch			W5	Lunch
14:00	16:00	2:00		W9	W7		W15
16:00	18:00	2:00	_	W9	W/		VV 15

### W6: ZOO-Project play with building blocks to build pgRouting web application (40 delegates)

Gérald Fenoy (GeoLabs SARL)

Sir Clive Granger Building: B29 B - Sept. 18, 2013, 9:30 a.m. to Sept. 18, 2013, 1:30 p.m.

The ZOO-Project is an open source software which provides a WPS (Web Processing Service) compliant and developer-friendly framework to easily create and chain OGC Webservices.

### W16: QGIS, OpenData & Cartographic Design; Create a Robin Hood tourist map of Nottingham (12 delegates)

Paul Naylor (Ordnance Survey)

Sir Clive Granger Building: B26 E - Sept. 18, 2013, 9:30 a.m. to Sept. 18, 2013, 1:30 p.m.

This workshop will show the importance of well applied cartographic design and how using Ordnance Survey OpenData and QuantumGIS you can create a Robin Hood tourist map.

### W10: GeoNode Developers Workshop (30 delegates)

Jeffrey Johnson (OpenGeo) with Simone Dalmasso

Hallward Library: LG101 - Sept. 18, 2013, 9:30 a.m. to Sept. 18, 2013, 1:30 p.m.

This workshop will guide participants through the process of setting up and customizing a GeoNode based project that can be deployed to provide an OGC standards compliant Spatial Data Infrastructure

### W8: Introduction to PostGIS (55 delegates)

Paul Ramsey (OpenGeo)

Sir Clive Granger Building: B29 A - Sept. 18, 2013, 9:30 a.m. to Sept. 18, 2013, 1:30 p.m.

In this workshop, participants will learn the basics of the most popular open source spatial database around.

### W5: OGC services with GeoServer: from journeyman to master (48 delegates)

Andrea Aime (GeoSolutions) with Simone Giannecchini

Trent B16 - Sept. 18, 2013, 9:30 a.m. to Sept. 18, 2013, 6 p.m.

This workshop will provide a introduction to OGC services implementation with GeoServer and GeoWebCache, covering the basics and moving forward to more advanced topics.

### W7: GeoNode, A complete SDI (45 delegates)

Jeffrey Johnson (OpenGeo) with Vivien Deparday

Sir Clive Granger Building: B29 B - Sept. 18, 2013, 2 p.m. to Sept. 18, 2013, 6 p.m.

In this workshop participants will learn how to deploy a full open geospatial data infrastructure with GeoNode.

### W9: QGIS Plugin Development with PyQt4 and PyQGIS (55 delegates)

Horst Düster (Sourcepole AG / Switzerland) with Nathan Woodrow

Sir Clive Granger Building: B29 A - Sept. 18, 2013, 2 p.m. to Sept. 18, 2013, 6 p.m.

The Workshop will introduce the participants into the methods and philosophy of the development of Qt4-Applications, the QGIS API and Python.

### W15: Big Data: The Challenges Presented by WCS 2.0 (30 delegates)

Ian Edwards (Met Office)

Hallward Library: LG101 - Sept. 18, 2013, 2 p.m. to Sept. 18, 2013, 6 p.m.

In this workshop we will introduce IRIS, along with interesting multi-dimensional datasets, and show how "big data" can be served up using your existing open source software stack using GDAL, QGIS, GeoServer and OpenLayers.

### Free Workshops

### W19: Introduction to high availability clusters with GeoServer and GeoWebCache (55 delegates)

Simone Giannecchini (GeoSolutions)

SIR CLIVE GRANGER BUILDING

B29 A - Sept 19th 14:00:00 to 16:00:00

This workshop will provide an introduction to setting up high availability clusters for OGC services using GeoServer and GeoWebCache.

### W20: SpatioTemporal data handling with GeoServer: an introduction with examples for MetOc and Remote Sensing data for WMS and WCS (55 delegates)

Simone Giannecchini (GeoSolutions)

SIR CLIVE GRANGER BUILDING

#### B29 A - Sept 19th 16:00:00 to 18:00:00

This workshop will provide detailed information on how to handle SpatioTemporal metadata in GeoServer for serving with OGC Services, with a particular focus on WMS and WCS.

### W21: Spatial analysis with QGIS and SEXTANTE (55 delegates)

Victor Olaya (OpenGeo)

### SIR CLIVE GRANGER BUILDING B29 A – Sept 20th 9:30:00 to 13:30:00

This workshop will introduce the SEXTANTE spatial data framework for QGIS, showing its components and its usage for all kinds of data analysis. A set of example cases will be detailed, which cover common analysis routines, as well as more advanced ones.

#### W22: Big Data in Geo (55 delegates)

Peter Baumann (Jacobs University)

### SIR CLIVE GRANGER BUILDING

#### B29 A - Sept 21st 9:30:00 to 13:30:00

Big Geo Data, their characteristics, variations, and new qualities (in particular, temporal aspects) are discussed in this workshop. OGC WCS and further standards will be in the center. Both concepts and their high-performance implementation will be addressed (rasdaman, MapServer, GDAL, etc.). Participants can execute many of the examples shown on their laptop, giving hands-on experience in standards-based access to Big Data. This will enable participants to pursue own research, make informed decisions on standards and tools, and elaborate Big Data solutions.

The presenter is editor of the WCS standards and chair of the main Big Data relevant working groups in OGC. His group is contributing the WCS conformance tests and the WCS Core Reference Implementation, rasdaman.

#### W23: WPS with GeoServer (55 delegates)

Jeff Johnson (OpenGeo)

#### SIR CLIVE GRANGER BUILDING

#### B29 A - Sept 20th 14:00:00 to 16:00:00

One area where web-based GIS has traditionally lagged behind its desktop counterpart is in analysis and processing. No more. The Web Processing Service (WPS), modeled on the more widely known Web Map Server (WMS) and Web Feature Server (WFS) protocols, adds support for web-based geospatial analysis.

### W24: Implementing spatial search engines (45 delegates)

Robert van Seeters (Geodan), Jan Boonen (Geodan), Steven Ottens (Geodan)

### SIR CLIVE GRANGER BUILDING B29 B - Sept 20th 9:30:00 to 11:30:00

This workshop is aimed at teaching how to integrate spatial data (e.g. using OGC webservices) with enterprise search solutions. We will cover indexing,

searching and presentation of search results to end users. We will work with live geographical datasets (e.g. INSPIRE download services) and combine those with non spatial datasets to provide a seamless search solution for all your data.

### W25: How to easily build your own GeoNetwork UI using widgets (55 delegates)

María Arias de Reyna (GeoCat BV)

### SIR CLIVE GRANGER BUILDING B29 A – Sept 20th 16:00:00 to 18:00:00

First, we will present the new HTML5 UI for GeoNetwork and how to use it (technically speaking). Then we will wander on the following topics: \* How to customize or create a simple geoNetwork UI using widgets \* How to add a widget to a non-geoNetwork webpage \* Use CSW/search api to search from an external website using geoNetwork widgets

### W26: GeoNetwork for dummies, or how to setup and use an SDI in 3 hours (45 delegates)

Jeroen Ticheler (GeoCat bv)

### SIR CLIVE GRANGER BUILDING B29 B - Sept 21st 9:30:00 to 13:30:00

The workshop will focus on the implementation of a GeoNetwork opensource based catalog to serve and access geospatial data in a Spatial Data Infrastructure.

### W27: Keep your data & metadata synchronized (45 delegates)

Francois Prunayre (titellus)

### SIR CLIVE GRANGER BUILDING B29 B - Sept 20th 14:00:00 to 18:00:00

Synchronization of geospatial datasets and their metadata is a key point of today's SDI. In this workshop you will learn how data management applications such as Talend ETL could be combined to analyze your data and populate or update your metadata catalog in Geonetwork.

### W28: Advanced spatial data analysis with GRASS GIS 7 (45 delegates)

Markus Neteler (Fondazione Edmund Mach, GIS and Remote Sensing Unit), Luca Delucchi (Fondazione Edmund Mach), Pietro Zambelli (University of Trento)

### SIR CLIVE GRANGER BUILDING B29 B - Sept 19th 14:00:00 to 18:00:00

GRASS GIS is a free Geographic Information System (GIS) used for geospatial data management and analysis, image processing, graphics/maps production, spatial modelling, and visualization which runs on MS Windows, Mac OS X and Linux. This advanced workshop will give a brief overview of the new capabilities implemented in GRASS GIS 7 followed by a hands-on session by the attendees.

#### **Academic Track**

The Academic Track aims for a strong connection with the other elements of FOSS4G 2013, by bringing together researchers, developers, users and practitioners carrying out research and development in the geospatial and the free and open source fields. With the Academic Track motto "Science for Open Source, Open Source for Science", we will offer academic papers describing the use of open source geospatial software and data, in and for scientific research, as well as academic endeavours to conceptualize, create, assess, and teach open source geospatial software and data.

The Academic Track committee has selected, in a double-blind review process, 19 papers for publication and presentation. A sub-selection of the papers were given the opportunity for inclusion in the renowned international journal 'Transactions in GIS'. The remaining papers will be published in the online OSGEO Journal. Authors of all selected papers will be presenting their work within the parallel tracks of the main programme. In this way they can share their academic efforts with the community at large, to generate attention and cross-pollination with industry, developers and users.

### Birds of a Feather

Birds of a Feather (BOF) sessions are a chance for you, the conference attendees, to plan your own informal meetings. A wiki page has been set up at http://wiki.osgeo.org/wiki/FOSS4G\_2013\_BirdsOfAFeather, where you can organise and publicise your meeting. Information will also be displayed on notice boards in the main vestibule at EMCC.

#### **Code Sprint**

The code sprint, on Sunday 22 September, is about getting groups together to work on Open Source software projects, sitting around a table and sharing ideas. It's not just about writing code – a project has many needs, including documentation, testing, and providing feedback. Give back to the project that you love by spending a day with the project's developers. There are roles needed to be filled, no matter what your expertise. Full details are on the OSGeo wiki at http://wiki.osgeo.org/wiki/FOSS4G\_2013\_Code\_Sprint.

#### **GeoHack**

The Global GeoHack, sponsored by the UK Met Office, takes place in the GeoCamp on Tuesday 17 and Wednesday 18 September from 9.30am – 5.30pm. You don't need to be a developer to attend. It's a free event, open to everyone, but you must register in advance. All the information you need, including registration and challenges, is on the FOSS4G 2013 website.

#### **OSGeo AGM**

The Open Source Geospatial Foundation, OSGeo, will hold its Annual General Meeting during FOSS4G. The meeting is open to everyone. The goal is to share details of the activities of the foundation, from committees and local chapters all around the world. More details can be found on the wiki page at: http://wiki.osgeo.org/wiki/Annual\_General\_Meeting\_2013.

### Opening up the Map

A digital map gallery will showcase work submitted for the 'Opening up the Map' competition. Maps will also be displayed throughout the venue on large format projected displays, as well as being used in between sessions. Have a look at the maps (maybe say "hey...that's my map!") and start a conversation.

#### **Unconference**

Is something missing from our programme? Do you have a last minute burning topic you want to talk about? Need answers to a specific difficult problem? Head over to the un-conference on Friday. This informal session will driven by the participants – there is no agenda, just turn up.

### Social Events

Throughout the conference, there are a number of social events with a greater or lesser degree of organisation. The main ones are listed below. If you haven't already booked for these, check at the Conference Desk to see if there are any places left.

# Wednesday 18th: Icebreaker, EMCC Auditorium, from 7 till late

This event will be a great chance for you to meet and mingle with your fellow conference attendees and impress them with your geographic knowledge. Following a sit-down meal in the Auditorium at EMCC, author, TV and radio presenter, and self-confessed "Map Addict", Mike Parker (http://www.mikeparker.org.uk/) will entertain with a light-hearted after dinner talk. There will then be a "pub-quiz" with a geographic theme.

### Thursday 19th: Gala Night, GeoCamp from 7 till late

Join us in the Big Tent for the main social gathering of FOSS4G (attendance included in your ticket for all except day passes). There will be a "Tastes of Britain" buffet supper with food and drink from around the UK, followed by carefully-targeted entertainment, live music and whatever else the evening might bring...

# Friday 20th: Excursions (Not included in Conference Packages)

On Friday night we hope you will join us for the option of a trip away from campus for an evening at the Nottingham Greyhound Track (including a meal). Alternatively enjoy yourself in the city under your own steam, or relax on the University campus. Full details are posted on the conference website.

### **Saturday 21st: Closing Party**

For those able to stay for the Saturday night and the events on Sunday, we'll be winding down with an evening of suitable entertainment and enjoyment. Details will be available at the Conference Desk and on the website.





# **About OSGeo and the UK Chapter**





### OSGeo

The Open Source Geospatial Foundation (OSGeo) is at the forefront of the geospatial industry and takes responsibility for a large selection of some of the best open source geospatial software available today. We're all aware of the incredible work that developers contribute to these world-class projects, but have you given much thought to the importance of the work undertaken by OSGeo itself?

In addition to promoting interaction between users, developers, and the wider community, OSGeo is the umbrella organisation for regular events across the globe, from the international FOSS4G conference, to smaller regional events and code sprints. The foundation also provides links, documentation, websites, and other information and resources to the whole community.

To get involved, take a look at the activity on the OSGeo mailing lists (e.g. OSGeo Discuss) and interact by asking questions – and remember, in the open source community often the person who understands and reports a problem is also the person who steps up to help fix it!

### **UK Chapter**

OSGeo:UK (@osgeouk) is the focal point for developers and users of open source geospatial software in the UK. Local chapters are an essential part of the OSGeo community, providing valuable networking opportunities, advice, local support and arranging regional events.

Look out for our AGM at FOSS4G (date/time to be confirmed on FOSS4G website) and come along to find out more about what we do and our plans for the year ahead. For upcoming events and to subscribe to our discussion list, visit http://www.osgeo.org/uk.

The UK Chapter is proud to welcome FOSS4G to the UK for the first time.

Ian Edwards

### Reference

### Alphabetical index of presenters

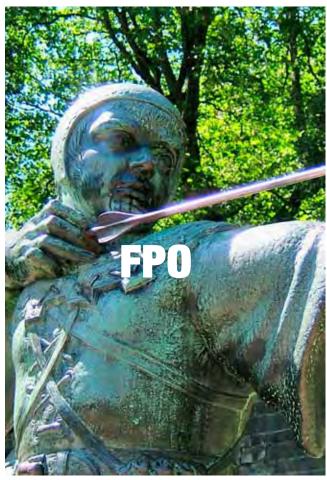
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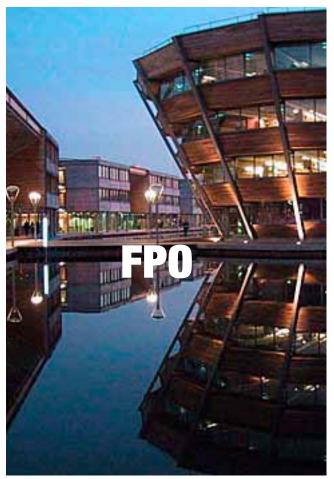
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# Open Source Location-aware Technology for the Enterprise

### Grow your community, grow your business

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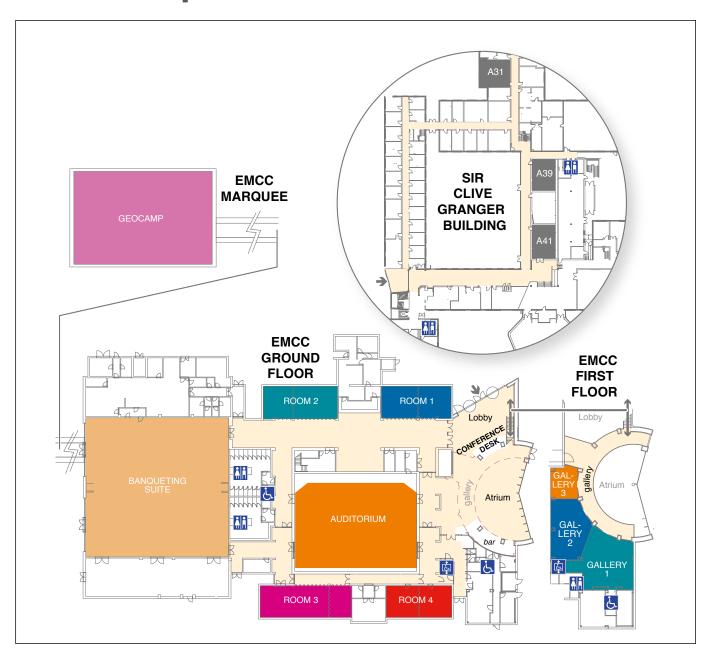


**EDINA** provides the UK education sector with access to geospatial data through services such as **Digimap** and **Digimap for Schools**. EDINA relies on open standards and open source software to deliver services and is proud to support the community through sponsoring **FOSS4G 2013**. To find out more about what **EDINA** does, and to see how we hope to support the students of tomorrow, please visit **edina.ac.uk** 





### **Venue Map**





The Global Conference for Open Source Geospatial Software

East Midlands Conference Centre Nottingham, 17th to 21st September