



## gvSIG Mobile on Openmoko: Ubiquitous Spatial Data at Oxford Archaeology

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http://oadigital.net http://gvsigmobileonopenmoko.wordpress.com







## Oxford Archaeology in brief:

Europe's largest independent provider of Archaeology and Heritage solutions

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- Operating for over 35 years
- Over 400 members of staff managed via 4 offices across Britain and France
- Routinely work outside of Europe
- Registered as an educational charity under British law
- Major contributor of archaeological research
- Active developers and advocates of Open Source Software & data standards
- http://thehumanjourney.net







#### The business of Archaeology in Europe

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Planning Policy Guidance 16 (PPG 16)

A (British) legal requirement that states in order to obtain planning permission for any development you must first conduct an archaeological assessment of the affected area and perform any necessary works required to preserve archaeological remains

Founded on the Conservative principle of "polluter pays"

Comparable legislation exists throughout Europe and the developing world

Many countries around the world are beginning to introduce this type of law







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# Spatial data within Archaeology

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Absolutely crucial





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## Spatial data within Archaeology

#### Absolutely crucial

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Leads the archaeological process during:

- Initial assessment and planning
- Excavation
- Post-excavation analysis

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- Various forms of dissemination
- Academic research and enquiry





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The role of GIS and spatial applications continue to grow within the industry

Oxford Archaeology is leading the way when it comes to spatial applications within Archaeology







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#### Some big problems:

The industry is dominated by proprietary software packages that aren't suited to archaeological practice:

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ArcGIS & CAD packages

Archaeology is often at the mercy of large software vendors – we have to make do with their poor and expensive software and try and find ways to make it work in a manner that's good for us.







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We much prefer Open Source Software...





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### **Open Archaeology**

Oxford Archaeology's published core strategy comprising of a commitment to:

Open Source Open Standards Open Data

http://openarchaeology.net https://launchpad.net/openarchaeology

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Our business is one of preservation by record, as such our records need to be as robust as possible. A policy of Open Archaeology is necessary to preserve the archaeological record for future generations, it's also the best way to deal with the archaeological record today.







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# Oxford Archaeology & gvSIG

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#### Oxford Archaeology & gvSIG

We install gvSIG on every computer we provide to our staff

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We are trying to be as active as we can be within the development of gvSIG 2.0, contributing a large number of man hours to testing and development

We have released our own version of gvSIG, available from: http://oadigital.net

We actively promote gvSIG both within Archaeology and elsewhere outside the discipline

We initiated the development of gvSIG for Openmoko and provided pre-release hardware to Juan at Pro Develop SL







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Openmoko:





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#### Openmoko:

Linux powered mobile phone complete with:

•GPS •800x640 touch-screen •WiFi •Bluetooth •3D accelerometers

Completely open software & hardware







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Completely open software & hardware

The perfect platform for gvSIG Mobile







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#### **Openmoko:**

Linux powered mobile phone complete with:

•GPS •480x640 touch-screen @ 283 dpi •WiFi Bluetooth •3D accelerometers

Completely open software & hardware

The perfect platform for gvSIG Mobile, or any other application you would like to run outside







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## Java VM on Openmoko:









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## **Openmoko** at Oxford Archaeology:

We aim to provide an Openmoko FreeRunner to every member of field staff we employ:

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During early 2009 we will begin testing on-site archaeological recording using FreeRunners instead of the traditional pens and paper method

Thanks to gvSIG Mobile on Openmoko, we can begin integrating spatial data right from the beginning of the archaeological process in an ubiquitous and previously impossible way







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#### Openmoko in the wider world:

Running an Open Source application on top of a completely open stack allows us to produce custom solutions for a wide range of industries.

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Some quick possible examples:

- Logistics
- Tourism
- Civil services; Policing, Fire brigades, health care, etc.
- Conservation and ecological management







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The potentials for Mobile GIS applications are enormous, but it makes no sense to run an Open Source GIS tool on a restrictive and closed source mobile OS







#### Openmoko in the wider world:

OA Digital will design and provide the correct mobile GIS application for your needs by leveraging the power of Open Source from the hardware level all the way to the end user application

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http://oadigital.net







## Finger orientated gvSIG Mobile interface:

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### Video demonstration:







#### Video demonstration:

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Special thanks to:

Michael Shiloh, Openmoko

Robert Schuster & Sebastian Mancke, Jalimo







#### Thanks for listening

Please read our more detailed paper when it is made available and get in contact with any feedback

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