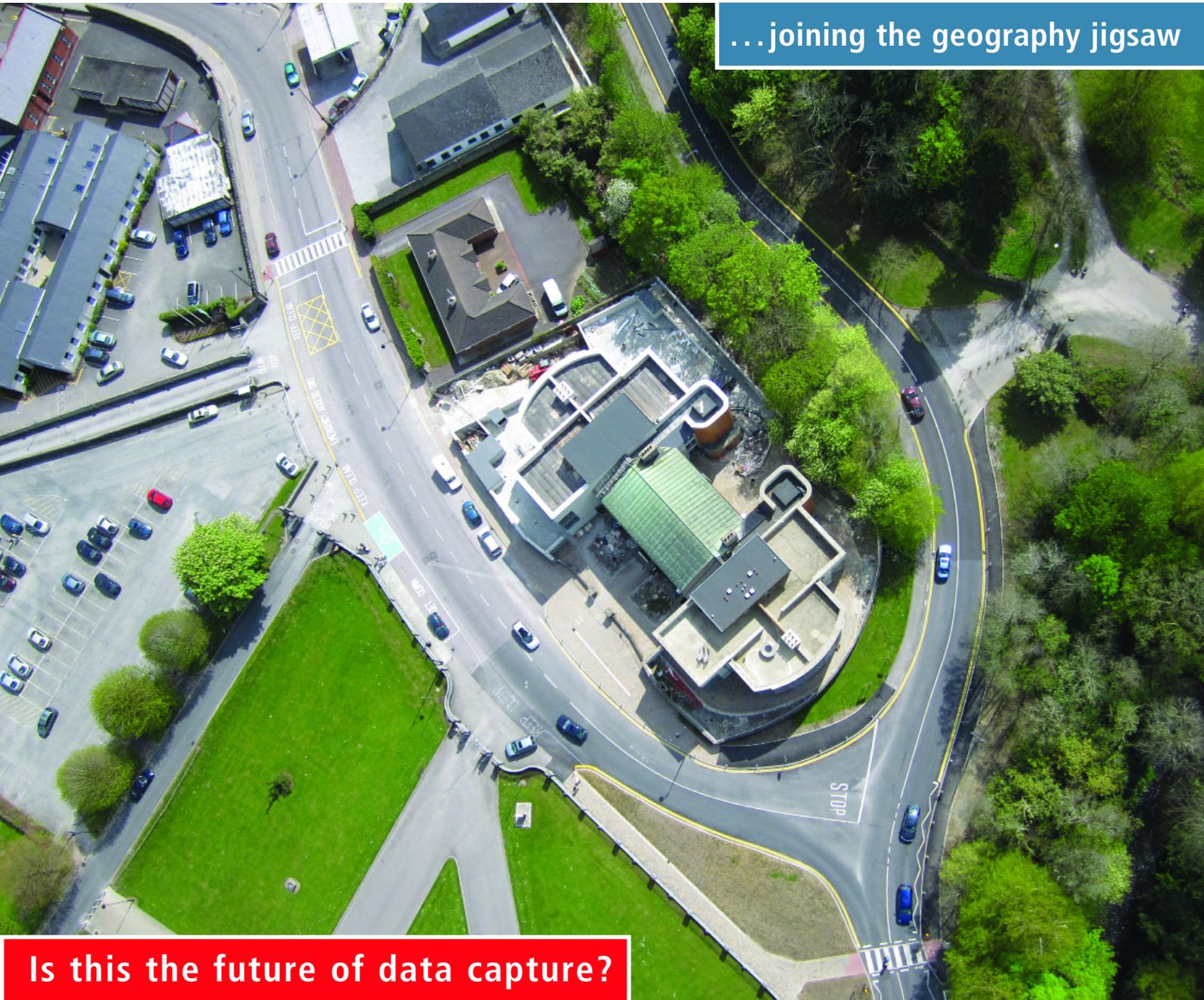


GIS

Professional

issue 40 : June 2011

...joining the geography jigsaw



Is this the future of data capture?

a deep dive into GIS with Esri UK

Location Council's first report

Peace in our time: GeoPlace sets out its stall

B2C goes mainstream at Where 2.0

Power to the people: Forth Valley reveals how

On the road to national SDIs and INSPIRE

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Front cover: devices for capturing imagery and digital data are getting smaller and more manoeuvrable. The latest are remotely controlled and can capture scenes like this one of Kilarney Cathedral. For more, turn to page 33.



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Developments of National SDI's in Europe

Ian Masser reviews the 2010 INSPIRE reports from EU member states – so what progress is being made?



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Harnessing the power of location information

Robin Waters summarises the 2010/11 UK Location Council report, considering progress made and plans for the future.



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Government pays; Ordnance Survey delivers

The Public Sector Mapping Agreement is now in place – but what does it mean? Robin Waters unravels the small print.



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GeoPlace: the addressing war is over!

With GeoPlace now on track, Robin Waters was invited to hear more about this new joint venture for addressing.



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Conference report – a deep dive into GIS

Delegates stormed the Hilton London Metropole for Esri UK's annual conference in May. Hayley Tear and Stephen Booth report.



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GaaS: power to the people!

With the need to save costs growing, GIS as a Service can help organisations control the use of their resources, argues Alan Moore.



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So, how can we improve transport in Britain?

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Where 2.0 kicks austerity off the agenda!

In part one of his conference report, Andy Coote focuses on what players in the B2C location are up to.



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OS plc or OS pdc? That may be the question!

Despite progress with the opening up of public sector data, many issues are still being raised. Robin Waters reports from a recent Locus meeting.

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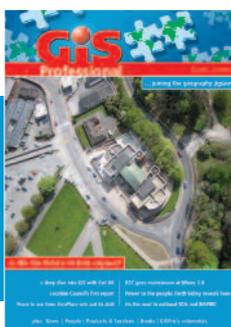
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Copy dates **Editorial:** 4 July

Advertising: 15 July



For details of how to subscribe to GISPro, turn to page 34.

read on...

Being an Intelligent Client

a guide to successful commissioning and managing of land and engineering surveys



By Richard Groom

- a simple guide for managers, engineers, architects, surveyors and all who commission or manage survey projects, or needs to discover more about survey techniques and technologies

The concept of risk is well understood in relation to health & safety. But with surveying, people tend to focus on accuracy and precision.

Nevertheless, there *are* technical and commercial hazards in surveying and they come with expensive risks for clients.

The consequences of a survey 'accident' can be significant. Projects can be delayed. Cost implications can be substantial. Sometimes they can be catastrophic and render a project unfit for purpose – like an Olympic-sized swimming pool built too short.

This guide is intended to help those who commission and manage surveys to recognise the hazards and manage the associated risks.

In two parts, Part 1 deals with **Managing Survey Projects** and includes 20 key topics in preparing contracts and specifications as well as managing the work once a survey firm has been appointed. This is essential reading for professionals working in the built environment who appoint or manage survey companies.

Part 2 sets out the **Principles of Surveying** and covers over 30 topics, which may help reveal the hazards that can lurk in surveying processes. Engineers, architects, other professional disciplines as well as older surveyors in need of a reference point or a refresher course, will find this a reliable reference point.

The Guide is therefore intended as an essential reference source. It can also be an ideal source book on surveying for academic courses. Younger readers will find all of the essential techniques presented together with current technology and its applications.

The author is an experienced chartered surveyor with many years experience working in both the private and public sectors as well as in the UK and overseas.

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welcome
to the June issue of *GIS Professional* . . .

vernacular geography remains a challenge

The phrase 'vernacular geography' came up at the Esri UK user conference last month. This is an important acknowledgement of an old mapping problem. In the early days of Ordnance Survey their military surveyors and sappers asked the locals for names of the villages, roads, watercourses, hills and mountains they were mapping. Often they got wildly conflicting answers, as in the case of Ireland where the locals led them a merry dance (Brian Friel's play *Translations* shows both the problem and the culture clash between the world of the rapidly industrialising 19th century and idyllic rural unworldliness).

In the modern world the problem still remains despite the best efforts of the NLPG and its newborn successor, GeoPlace. I was reminded of an example recently when giving directions to someone heading for the Esri event held in a hotel in London's busy Edgware Road. I was extremely confident in my directions because I grew up in the area. I knew full well that it had changed almost beyond recognition. The last great music hall was long gone, together with the Odeon cinema and swath of gimcrack buildings thrown up in the mid 19th century. What I had forgotten was a remaining relic of the 19th and 20th centuries railway mania when companies were allowed to compete vigorously for passengers rather than routes. Take a look at one of those excellent reprints by Cassini of the first OS Popular Edition published after the first world war and look at how many towns had more than one railway station as the companies fought for business. The confusion for both travellers and those meeting them must have been fun (another subject for Mr Friel?).

One of many remaining legacies of that era is two unconnected Edgware Road stations on the London Underground network, located in different streets and separated by a good 100 metres. That contributed to delays on 7 July 2005 when London was targeted by multi suicide bombers, one of which was at Edgware Road. The emergency responder should have been alerted to the likely potential of a caller not knowing which of the two stations had been hit.

The arrival of GeoPlace is therefore most welcome and should be a step to solving these sorts of anomalies. But it should have happened a decade ago. The catalyst this time has been the public sector's realisation of the need to share definitive datasets and the new found government willingness to centrally fund the data suppliers. If this had happened ten years ago - when it was already on the table - we could have been ahead of the game with local authorities, utilities and the commercial sector better geo-enabled to weather the recession. That it didn't is to the shame of the squabbling government departments and agencies involved aided and abetted by a very short-sighted treasury.

In addition to our detailed reporting of the Esri conference, this issue has some exceptionally well informed and researched articles that geo professionals everywhere should read. **Andy Coote's** report on the Where 2.0 conference is essential study for those who want to stay on the curve with what's happening in the digital cradle that is California - just remember the old adage, when America sneezes, Europe catches a cold!

Meanwhile, **Robin Waters** has been busy on our behalf providing a brief on the new GeoPlace venture, the launch of the Public Sector Mapping Agreement, the UK Location Council's first annual report and attending a Locus meeting. The first three are all events that reflect the changed world we are in since the arrival of data.gov and the release of Ordnance Survey map data. The Locus event revealed that the Public Data Corporation is still very much on the coalition Government's agenda. Driven by a need for consistent licensing as a precursor to private investment, the PDC could usher in yet another brave new world. As Robin Waters observes, members of Locus which represents private sector data providers and re-users, should be careful what they wish for. I must also direct you to **Alan Moore's** excellent article (page 23) explaining how GIS as a service can help public sector users contain costs yet improve services, and to **Ian Masser's** informative study of progress across Europe on INSPIRE. I do hope that you agree that this is an issue with plenty of topics covered in depth; essential briefing for today's geo professionals.

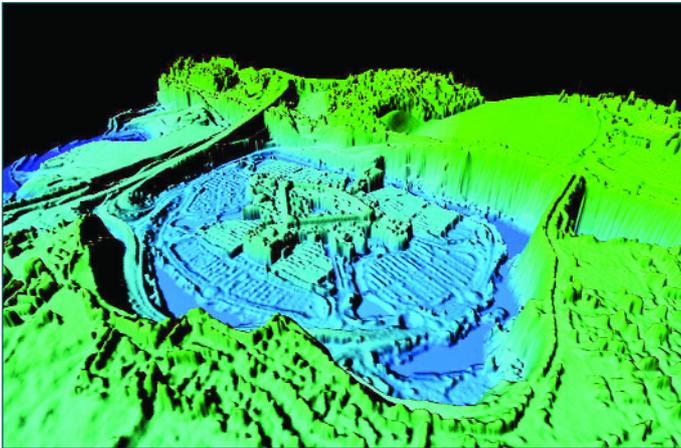
Stephen Booth, editor



The Locus event revealed that the Public Data Corporation is still very much on the coalition Government's agenda.



Kent kept in the picture



Bluesky has supplied nearly 4,000 sq km of 3D height data to Kent County Council. The digital terrain model (DTM) and digital elevation model (DEM) show heights above sea level and can be used to create 3D visualisations of the earth's surface and structures that cover it. The council will use the data for applications including viewshed analysis of major works, feasibility studies, planning applications and site investigations. Previously height data came with the Mapping Services Agreement (MSA) but is not included within the new Public Sector Mapping Agreement (PSMA). As a replacement, 'we selected the Bluesky data as they were able to provide the accuracy and coverage we required with a competitive price and quick turnaround. The in-perpetuity licence also made it very attractive,' says Ben Holmes, senior GIS technician for the council.

AGI '11 and new economy

The AGI GeoCommunity '11 conference will take place on 21-22 September 2011 at the East Midlands Conference Centre in Nottingham. With the theme "Placing ourselves in the new economy", the event will offer two days of streamed seminars, plus a pre-conference icebreaker evening event on 20 September 2011. Read more on page 32 or visit www.agi.org.uk/geocommunity/

Mapping solar potential

Working with carbon reduction company Sustain, Bluesky is helping UK housing associations assess their housing stock's solar energy potential. Using aerial photography combined with 3D models, the company can measure the solar energy generating potential for individual properties based on factors like roof size and aspect. The measurements help housing

associations produce income from feed-in tariffs, reduce energy bills for householders and decrease carbon emissions. 'Using the data supplied we are able to calculate the potential yield on a roof by roof basis,' says Antony Scott, senior associate at Sustain. 'This can then be amalgamated into a value for the entire stock. We then work with the individual housing association to offer advice on funding options and on procurement, as well as management of the installation programme'.

GeoPlace & PSMA on track

Following approval from the Office of Fair Trading (OFT), the legal process to form GeoPlace has now been finalised. Production of the national address gazetteer database to provide one definitive source of accurate spatial address data for England and Wales is now on track for delivery in Autumn 2011. For more information, turn to page 18.

Also, public sector organisations in England and Wales now have access to Ordnance Survey mapping data under a single agreement following the launch of the Public Sector Mapping Agreement in April 2011. The ten-year agreement replaces the previous data contracts in the form of the local government Mapping Services Agreement, the Pan Government Agreement for central government and the Greater London Authority mapping agreement. Read more on page 16.

Location framework for EU

National geographical datasets can be harmonised to meet INSPIRE obligations whilst also addressing issues such as generalisation, quality evaluation, edge-matching and access control, the European Spatial Data Infrastructure Network (ESDIN) has concluded. The work, by a consortium of national mapping and cadastral agencies, academic institutions, technology providers, stakeholders and users of location data, lays the foundations for a European Location Framework. This will enable cross-border information to be geographically-referenced and allow citizens, businesses and governments to gain maximum benefit from the reuse of existing national datasets.

GIS award winners

Esri UK announced its 2011 GIS vision award winners at its annual conference in May. Transport for London won for central government with its Traffic Directorate Data Service while the local government award went to Bristol City Council for "Know Your Place", an online way of sharing information about historic Bristol. In the defence, national security & public safety category, the Joint Aeronautical and Geospatial Organisation won for DataMan – common geospatial intelligence services on demand to commanders, staff and soldiers in Afghanistan. Finally, the private sector award went to The GeoInformation Group's UK Map. For a detailed report on the conference, turn to page 20.

Innovators rewarded

The winners of the GeoVation Challenge, 'How can we improve transport in Britain' were recently decided at Ordnance Survey's head office. Mission:Explore were awarded £36,500 for the idea to encourage families to cycle by inviting them to complete geography-themed 'missions', plus a £1,000 prize after winning the community award voted for by the audience. Other winners were: My PTP (personal transport planner) for making informed travel choices in real-time, £36,500; CycleStreets, £27,000 to build a cycling advocacy toolkit; MySociety, £27,000 to implement the mobile element of their FixMyTransport initiative to allow travellers to report issues with the transport network; the @ccessAdvisR team, £27,000 for the idea of a disabled access route planner; the London Cycle Map Campaign, £6,000 to help create a colour-coded Tube-style map of the capital's cycling network. Read more on page 26.

Metadata milestone

Metadata about Ordnance Survey's products has been made available through data.gov.uk, alongside Inspire-compliant view services through the OS OnDemand web map service. Customers of the web map service will be able to view Inspire-related products as a raster image via a view service. The service has recently upgraded to ensure compliance and add more raster images of products. A further update later in the year will see VectorMap District and the National Address Gazetteer added.

Bluelight compatibility

Aligned Assets has developed a prototype gazetteer management system to be compatible with the recently released alpha version of the National Address Gazetteer (NAG). Upon the formal release of the NAG BS7666 database, the Symphony Bluelight Gazetteer will be capable of managing all 30 million records in the national gazetteer. The emergency services

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will also be able to complement the national gazetteer with their own records, which can be accessed and utilised by other systems.

CONTRACTS & PROJECTS

The 'PanGeo project – Enabling Access to Geological Information in Support of Global Monitoring for Environment & Security' – aims to provide an INSPIRE-compliant, free, online geohazard information service for the two largest towns in each EU country. Fugro NPA is coordinating the three-year EC FP7 project, which involves all 27 national Geological Surveys of the EU. Watch out for the next issue of GISPro for a full report on this project.

Ordnance Survey has awarded a four-year framework agreement for the supply and maintenance of geospatial data, replacing previous data collection contracts. The work is shared between Blom Aerofilms, COWI A/S, Getmapping, Infotech Enterprises Europe and Photarc Surveys.

1Spatial has signed a contract with Ordnance Survey Ireland (OSi) to create a seamless, scale independent core database for the integrated management of existing

large-scale, small-scale, boundary and address information for Ireland. The database, PRIME2, will be the foundation of OSi's operations for the next two decades.

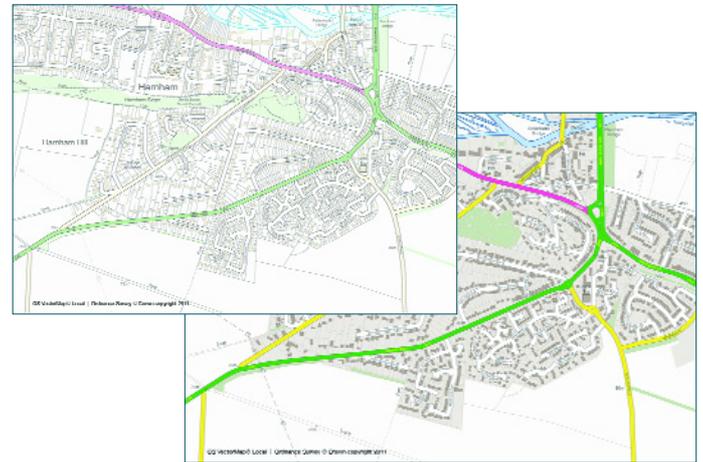
The Isle of Man Government (IoMG) has signed a framework agreement with Esri UK for the future provision of GIS software and services across all its government departments. The agreement includes the implementation of the LocalView Fusion GIS platform, which will be used to drive efficiency savings by facilitating greater access to "self service" operations to reduce the cost of servicing citizens' enquiries.

BRIEFS

Michael Nicholson, MD and CEO of Intelligent Addressing (IA), and Tony Black, the operations director, have set up the information management consultancy, Intelligent Addressing LLP. They will give advice on a wide range of issues related to spatial information management.

The Power House exhibition showcases the major organisations of state, which have worked within the Tower of London walls throughout the centuries, including Ordnance Survey. The exhibition is open now. For more information, visit

CVD maps available



Ordnance Survey is developing a single colour palette for its maps with shades that consider people with colour vision deficiency (CVD) but are still cartographically effective for those without colour deficiencies. Until now, alternative palettes were required for different variations of CVD. The mapping agency is working with the Royal National Institute of Blind People (RNIB) to incorporate the colour palette in its products. Among the first to benefit will be customers of OS VectorMap Local.

www.royalarmouries.org/visit-us/tower-of-london/power-house.

savings in the region of 40% in the first year for DCLG.

The UK Department for Communities and Local Government's Geography Publishing Service (GPS) has been launched in the cloud. The migration of the GPS by consultancy, Informed Solutions, to a fully managed, cloud-hosted service is expected to realise

Industry charity, MapAction, recently deployed two team members to the centre of the humanitarian crisis in the Ivory Coast. The team travelled to Bouake in central Cote D'Ivoire to support a UN assessment team tasked with getting a clear picture of humanitarian needs.

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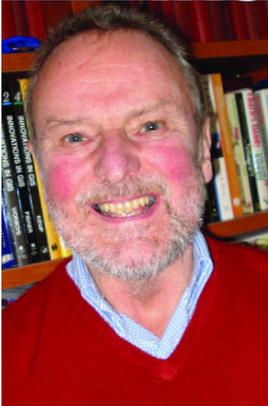
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07

2010 INSPIRE reports



Ian Masser: 'some reports contain too little information and can only be properly understood by reference to other documents'.

ARTICLE 21(1) OF THE INSPIRE Directive establishing an Infrastructure for Spatial Information in the European Community (EC 2007) requires Member States to "monitor the implementation and use of their infrastructures for spatial information" and to "make the results of this monitoring accessible to the Commission and to the public." It also requires them to prepare regular reports on their progress. According to the Implementing Rules on Monitoring and Reporting (EC2009) and the supporting documents prepared by the relevant Drafting Team (INSPIRE 2009a and b) these reports should contain information on five main topics:

1. Organisation, coordination and quality assurance
2. The contribution to the functioning and coordination of the infrastructure
3. Usage of the infrastructure for spatial information
4. Data sharing arrangements
5. Cost benefit aspects

Portugal and Romania contain the longest discussions on matters relating to functioning and stakeholder involvement.

Responses to the questions on usage and data sharing are much more limited and a number of countries claimed that they did not yet have information available or that it is too early in the INSPIRE implementation process for provision of useful information on these topics. However, the reports for Belgium, Spain, Romania and Slovenia devote at least four pages to the usage of spatial information and those for Greece and Spain contain more than three pages of text relating to data sharing. Every country apart from France provides some information on the costs and benefits of INSPIRE implementation even though very few had much direct experience of this process.

Table 1 must be treated with some caution. Indicators of length should not be confused with indicators of quality. Some countries also provided lots of

Developments of National Spatial Data Infrastructures in Europe

The INSPIRE Directive mandates all the European Union member states to report on progress with their National Spatial Data Infrastructures. **Ian Masser** reviews the highlights of the first round of reports and identifies what progress is being made.

The deadline for the submission of the first of these reports to the Commission was 15 May 2010 with updates due every three years thereafter. Most of the reports were submitted in the language of the Member State but copies are now available in English on the INSPIRE website (<http://inspire.jrc.ec.europa.eu/index.cfm/pageid/182/list/indicators>). The reports total 692 pages of text and this article highlights important or interesting aspects of these reports with a commentary on each section and a final summary.

Overview The length of each report and the relative sizes of the sections are summarised in Table 1. They vary from 12 pages (Ireland) and 13 (Poland and the UK) to 88 pages of text and annexes in the Portuguese report. Most are between 20 and 40 pages in length with an average of 27.7 pages. France and the Netherlands also describe the methods used to calculate the statistical indicators that are another input to monitoring.

Most reports have between four and ten pages dealing with matters of coordination and quality assurance and a similar number of pages describing the functioning of their SDI and identifying the main stakeholders. The most extensive discussions of coordination are in the reports by Belgium, Finland and Romania while the reports for Belgium, Hungary,

maps and diagrams. Similarly, the inclusion of examples in the text can also affect the length of the reports.

Nevertheless, these statistics suggest that most countries provided enough information for the Commission's evaluation although Bulgaria and France produced reports with very limited information on the five main topics identified in the template. The text of the Bulgarian report contains only four and half pages of information on three of the five topics, while the French report devotes only 4.3 pages to these matters and its annexes refer to a separate matter – the calculation of the statistical indicators for monitoring. It might be that this reflects a very tentative stage of national readiness for INSPIRE implementation in Bulgaria but that is certainly not the case in France.

Coordination and quality assurance The introductory statements in the reports give some indication of the thinking that underlies INSPIRE implementation. The Dutch report, for example, states that they are aiming for a pragmatic implementation strategy as the lower house of the Dutch Parliament has "laid down that the Netherlands should not do more than is really necessary for INSPIRE". However, this pragmatic approach has already been developed in some detail. The Danish report states that the



Indicators of length should not be confused with indicators of quality.



Code	Country	Pages	Exec. Summ.	Intro	Coord	Functg	Usage	Sharing	Cost/Benefit	Concl	Annexes	Info on stats
AT	Austria	18	*	0.3	5.5	1.5	2.0	0.7	1.3	0.5	4.0	
BE	Belgium	42	2.3	0.4	10.0	8.0	5.3	2.5	3.2	2.0	4.0	
BG	Bulgaria	15	*	*	2.5	1.0	*	*	1.0	*	*	
CZ	Czech	32	0.6	1.0	7.0	7.0	3.0	1.5	2.3	0.3	1.3	
DE	Germany	24	*	0.3	3.3	3.0	*	2.5	1.8	0.3	6.0	
DK	Denmark	17	0.5	0.3	3.0	2.0	3.0	1.3	0.5	1.0	*	
EE	Estonia	25	*	1.0	4.6	5.3	3.0	1.6	0.8	1.8	1.3	
EL	Greece	32	1.8	2.5	5.1	2.5	1.4	3.6	2.3	0.5	7.0	
ES	Spain	36	0.6	1.3	6.0	4.3	5.0	3.5	1.5	1.0	5.0	
FI	Finland	31	0.5	0.3	9.3	5.5	3.5	2.3	2.5	1.0	1.0	
FR	France	14	*	*	2.0	*	1.5	0.8	*	*	2.3	5.3
HU	Hungary	26	0.5	1.0	4.0	8.4	1.3	1.2	1.1	0.2	0.6	
IE	Ireland	12	0.5	0.3	2.5	1.5	*	0.5	0.4	0.3	1.3	
IT	Italy	20	0.2	2.1	5.0	3.2	*	*	0.3	0.1	2.0	
LT	Lithuania	26	0.2	1.0	6.0	7.5	3.0	0.5	2.0	0.7	2.0	
LU	Luxembourg	23	*	0.5	4.7	5.3	1.7	0.5	0.5	0.5	2.0	
LV	Latvia	25	0.2	0.8	4.5	5.5	3.0	1.0	1.4	0.5	2.1	
MT	Malta	14	0.3	0.2	2.5	1.5	0.7	0.6	0.2	0.2	0.3	
NL	Netherlands	36	1.0	1.8	4.1	3.7	1.7	1.1	3.0	*	5.0	8.0
PL	Poland	13	*	*	4.0	2.0	2.5	0.3	1.0	*	*	
PT	Portugal	88	0.7	1.6	9.0	13.0	1.3	1.4	1.1	0.8	42.0	
RO	Romania	49	0.2	0.3	11.0	8.5	4.5	2.1	2.0	2.2	7.0	
SE	Sweden	19	0.7	0.5	5.0	2.0	*	0.5	1.5	0.5	2.0	
SI	Slovenia	26	*	0.5	4.5	5.5	4.0	1.0	1.4	0.6	2.0	
SK	Slovakia	16	*	1.5	3.6	2.5	1.3	*	0.5	0.3	1.0	
UK	U. Kingdom	13	0.2	0.4	4.0	3.3	*	0.5	0.3	0.2	1.0	
	Total pages	692	11.0	19.9	132.7	113.5	52.7	31.5	33.9	15.5	102.2	
	Average/doc	27.7	0.4	0.8	5.3	4.5	2.1	1.3	1.4	0.6	4.1	

* No information available

The report from Cyprus has not yet been released in English.

implementation of INSPIRE has made good progress and that there is constructive cooperation which is characterised by both informal contracts and a number of formalised agreements.

The lead agency for coordination is the national mapping and/or cadastral agency in 14 cases. Most of the lead agencies in the other 12 cases are environmental agencies or Ministries with environmental responsibilities. Notable exceptions are Bulgaria (the Executive Agency for Electronic Communication Networks and Information Systems in the Ministry of Transport, Information Technology and Communications) and Malta (Malta Information Technology Agency).

All 26 countries have already, or are in the process of, creating a structure to coordinate the implementation of the INSPIRE Directive. In most countries this takes the form of either a National Council for Geographic Information (Finland) or an INSPIRE Coordination Committee (Czech Republic). In

some cases this is based on a modified version of an existing committee such as the *Conseil national de l'information géographique (CNIG)* in France or the Advisory Council for the National Geographic Information System (CO-SNIG) in Portugal. A special agency called Geonovum has been set up in the Netherlands to deal with the technical aspects of INSPIRE implementation. This body is responsible to the Ministry of Housing Spatial Planning and the Environment through its INSPIRE Steering Committee.

Fourteen coordination bodies are restricted to central government agencies while six contain members from all three levels of government (Austria, Belgium, Germany, Italy, Portugal and Spain). The remaining six countries (Czech Republic, Finland, Ireland, the Netherlands, Sweden and the United Kingdom) also involve representatives from the private sector and/or national geographic information associations such as CAGI (Czech Republic), ULI (Sweden) and the AGI (United Kingdom).

Above: Table 1 – Statistical summary of the reports

Functioning and coordination of the Infrastructure

Most Member States used this section to give an account of the historic development of their SDI activities. The Czech report explains how the current SDI is based on large amounts of acquired data, services which have been made available, and an emerging Geoportal. It also points out that central "horizontal" coordination has been lacking so that the infrastructure is fragmented and formed around individual projects. Slovenia reports that there was no operational SDI before a recent Act brought it into being, although some of the elements including the metadata, the spatial datasets and the services related to them had been available for over ten years.

On the other hand, Finland's National Geographic Information Strategy 2005-2010 sets out principles, goals and measures which have guided efforts to improve the use and usability of spatial information in recent years and, in the United Kingdom, INSPIRE compliant data is seen as providing a complementary platform for UK Location which encompasses the implementation of both INSPIRE and the UK Location Strategy.

Most countries provided information relating to the four categories of stakeholder (users, producers, service providers and coordinating bodies) but the amount of detail varied considerably. Estonia, Greece, Luxembourg Poland and Romania limited their discussion to central government agencies; the other countries included some reference to users and the private sector. Latvia, Romania and Slovenia also directly linked their discussion of stakeholders with the specific data requirements of Annexes I, II and III of the Directive.

Relatively few states reported any specific measures to facilitate data sharing but much more activity is reported in connection with stakeholder cooperation. For example, Spain has created twelve expert working groups to deal with specific aspects of spatial information policy. Finland has also established four working groups as well as a number of information services projects led by the IT Management Unit.

Usage of the infrastructure for spatial information

In this part of the template member states were asked to provide information regarding the use of spatial information with particular reference to network services and datasets. Nearly half reported that they were unable to provide information on these topics because, like the United Kingdom, they felt that "it is too early in the life of UK Location to provide significant examples of usage under these headings." Nevertheless, more than half the respondents provided examples from ongoing projects. However, it is arguable as to how much of this activity would have taken place irrespective of the demands of the INSPIRE Directive.

With respect to cross border usage, as might be expected, small countries that share boundaries with several neighbours report the most progress. The Czech report, for example, contains lots of examples of cross-border cooperation with neighbouring countries with respect to topics as diverse as administrative areas, property register parcels, transport systems, water agreements, protected areas and biodiversity.

Data sharing arrangements Most countries reported that formal data sharing agreements between public authorities were not very common but there are a number of interesting exceptions to this rule. Luxembourg states that a national law stipulates spatial data can be shared free of charge between all the public authorities and that is why a set of non-secured OGC compliant WMS/WFS web services are available to everyone having access to the state network.

Some measure of data sharing is also necessitated in countries with a federal structure of government. Germany reports that data sharing agreements have been in operation for nearly twenty years. An administrative agreement in 2006 between the federal Ministry of the Interior and the Lander covers the provision of cartographic and topographic data. This was reinforced in 2009 by a further agreement regarding the continuous transmission of official digital spatial data for use by the federal sector.

Several other countries report on developments under way. The Netherlands refers to the Geo Gedeld framework that is based on a number of standard conditions for use based on the Creative Commons licence. This form of licence is also being used by the UK National Archives to create a framework for UK Location.

Almost every country provided details about the barriers to data sharing and several countries provided substantial lists. Most of these can be summarised, as in the Danish report, under main headings: technical, organisational, legal, and financial. But only Slovakia highlighted technical problems whereas six countries highlighted organisational matters. Barriers arising out of federal structures of government affect Austria, Belgium, Germany and Spain while barriers associated with the needs for pan-government collaboration affected Slovenia and the United Kingdom. Six other countries were particularly concerned about access, licensing and pricing (Finland, Hungary, Latvia, Luxembourg, and the Netherlands) while lack of funding was a major concern in Lithuania. Only Slovakia cited lack of knowhow as their major barrier to data sharing.

Cost/Benefit aspects The Dutch reported on the findings of a comprehensive cost-benefit analysis that was carried out in 2009. This considered two



Most countries reported that formal data sharing agreements between public authorities were not very common but there are a number of interesting exceptions to this rule.



alternatives. A basic model which assumes that the government transposes the Directive into law in such a way that it has a minimal impact on the organisations involved, and a collective model which assumes that every organisation must harmonise and open up its data in a standard way. The costs of implementing the basic model are estimated to be €32 million and the benefits are €66 million, a benefit-to-cost ratio of more than 2:1 whereas the costs of implementing the collective model are €41 million with benefits of €64 million, a benefit-to-cost ratio of just over 1.5:1. Investment costs are recovered in eight years and nine years respectively. These findings supported the Dutch Government's decision to select the basic model to implement the Directive.

Apart from this the content of the other reports varies considerably from a simple statement that the costs have yet to be estimated in Estonia, France, Ireland, Italy and the United Kingdom, to itemised lists in Lithuania, Latvia and Portugal. There are also many variations between countries in the time periods used for costing purposes and in agencies involved in the costing process.

The Danish report points out that it is very difficult to separate the costs of INSPIRE implementation from those that would have been incurred anyway as a result of investments in the national spatial data infrastructure. Similarly the Finland report estimates that €4.5 million will be needed for the SDI launch stage between 2010 and 2012 and that €0.8 of this will be used to develop a broader Geoportals to satisfy their broader NSDI needs as well as the INSPIRE Directive.

As might be expected, it is too early in the INSPIRE implementation process for most countries to be in a position to discuss the benefits observed. However, several reports give some indication of the scale of the benefits that might be expected from implementation of the INSPIRE Directive. Spain suggests that the savings for citizens and private companies accessing cadastral information via the internet could be as much as €157 million, a quantity far higher than the annual budget of the cadastre while the Dutch suggest that its social benefits may be far greater than the monetised benefits and costs in the findings of their report detailed above.

Conclusions The material that is contained in these reports provides a picture of the activities that were under way throughout Europe at the national level at the start of the INSPIRE implementation process. Member States will submit further reports under the same headings every three years. Taken together, these reports will track the evolution of SDI policy in the Member States and the problems that they overcome in order to fulfil their legal responsibilities under the provisions of the Directive.

The first round of reports describes mixed experiences. Most reports provide a good overview and the inclusion of organisational charts and diagrams helps to put the implementation activities into a broader context. On the other hand, some reports contain too little information and can only be properly understood by reference to other documents. This may present serious problems for international readers as the other materials may only be available in the national language(s).

Acknowledgements

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- INSPIRE 2009b. Template for reporting. <http://inspire.jrc.ec.europa.eu/index.cfm/pageid/182>

About the author:

Ian Masser retired as Professor of Urban Planning at ITC in the Netherlands in 2002. Educated in geography and town planning at Liverpool University, Ian received his PhD in 1975 and a LittD in 1993 from the same University. He coordinated the UK Economic and Social Research Council's Regional Research Laboratory Initiative (1986-91) and co-directed the European Science Foundation's GISDATA scientific programme (1992-7). Ian was Founder Chairman of the Association of Geographic Information Laboratories in Europe (AGILE) (1998-2000), President of the European Umbrella Organisation for Geographic Information (EUROGI) (1999-2003), and the Global Spatial Data Infrastructure Association (GSDI) (2002-4). His publications include eighteen books and more than 300 contributions to conference proceedings, books and refereed journals. His most recent book, 'Building European SDIs' was published by ESRI Press in 2007 and revised to incorporate new materials for a second edition in 2010.



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IF YOU PICK UP this edition of *GIS Professional* at the INSPIRE conference in Edinburgh you will also have been given a copy of the UK Location Council report for 2010/11. This article is a summary of that report.

In the report Caroline Spelman, Secretary of State for the Environment, is quoted as saying in March 2011: "I recognise the challenges in the current economic climate, but successful implementation of INSPIRE in the UK offers significant savings".

The Council is responsible for coordinating the implementation of the UK Location Strategy as well as the INSPIRE Directive. It has members appointed from government departments, the devolved administrations and local government as well as the chair of the Location User Group and the representative of the Association for Geographic Information (AGI) which provide strong engagement with a wide range of stakeholders beyond government. Chaired by a senior Defra official, currently Miles Parker, its most prominent achievement has been to ensure that location information will be integral to the

make a wide range of information resources available in re-usable form to meet different policy, service provider and end user needs as efficiently as possible.

Progress It is against this rapidly changing context that the Location Council's report must be judged. It has a budget of £1.5M and the balance of expenditure has changed significantly this year. In 2009/10, the Programme Manager and Technical Director were seconded to the programme from Environment Agency and Ordnance Survey respectively as contributions 'in kind'. All other members of the programme team were external consultants. During 2010/11 the contractors were replaced by permanent Defra staff and secondees from Natural England, Environment Agency and Countryside Council for Wales.

So what do we have to show for the £1.5M? Well, half of that sum has gone on 'IT Development' – including the design and building of the infrastructure necessary to deliver INSPIRE compliant services. The

Harnessing the power of location information

Considering the 2010/11 UK Location Council report, **Robin Waters** summarises the main highlights, considering progress made and plans for the future.

data.gov.uk portal, thus signalling that 'spatial' is no longer necessarily 'special' and helping to break down barriers between public sector datasets.

Context During 2010/11 the report notes dramatic changes in the production and provision of public sector information – not least location information. A combination of government initiatives, maturing technology and economic realism have led to a complete change in the licensing of Ordnance Survey information; a new joint venture company, GeoPlace, which will produce a single authoritative national address gazetteer; and a range of international, European and national initiatives that require location information as a fundamental input.

Since the original strategy was published in 2008 many other initiatives have developed requiring environmentally related location information. Nationally, there is the UK Environmental Observation Framework (UKEOF)¹, which provides an online catalogue following the rationalisation of observational data. There are European initiatives, such as the Shared Environmental Information System (SEIS)² and Global Monitoring for Environment and Security (GMES)³ and global initiatives such as the Group on Earth Observations (GEO)⁴. All of these need to be supported and in the UK the 'Living With Environmental Change' (LWEC)⁵ partner organisations are assessing how best to respond, collectively, through the development of an "Environmental Information Framework". This aims to

Location Council decided to cooperate with Defra, the Cabinet Office and Ordnance Survey to deliver a set of services for creating, harvesting and delivering metadata and to develop enhancements to data.gov.uk for users to perform geographic searches and to visualise data within an evaluation service. The UK Location Metadata Editor, available on line or by download is free of charge, open source but is only one option for data providers. Most GIS software vendors are expected to offer INSPIRE compliant metadata editing tools and, when the resulting metadata is registered and published, data providers' immediate obligations will have been met.

The report summarises the UK Location Strategy aims as:

- **Data & Metadata** – to know what data we have and avoid duplicating it;
- **Common Reference Data** – to use common reference data whenever possible;
- **Data Sharing** – to share data more easily – with common technology, standards and business relationships;
- **Skills & Capabilities** – to develop skills for using location information effectively; and
- **Governance** – to provide strong governance for implementation of the Strategy.

Together with the strategies developed by the devolved administrations ('*Geographic Information Strategy for Northern Ireland*'⁶, '*One Scotland*'⁷ and '*Location Wales*'⁸), the UK Location Strategy

“
The Location Council decided... to develop enhancements to data.gov.uk for users to perform geographic searches and to visualise data within an evaluation service.
 ”

promotes wider discovery, publication and reuse of all location information for any purpose.

UK Location has facilitated access to metadata through data.gov.uk and has endorsed the GEMINI2.1 metadata standard as published by AGI which is compliant with INSPIRE, CEN (European) and ISO (International) standards. It has sponsored the development of a Metadata Editor by Ordnance Survey based on the GeoNetwork Open Source platform which is available on-line or as a download. Other suppliers with compliant metadata software will appear on the web site.⁹ The Discovery Metadata Registration Service was launched on data.gov.uk in March¹⁰. This enables data providers or publishers to register so that their metadata can be automatically 'harvested' by data.gov.uk.

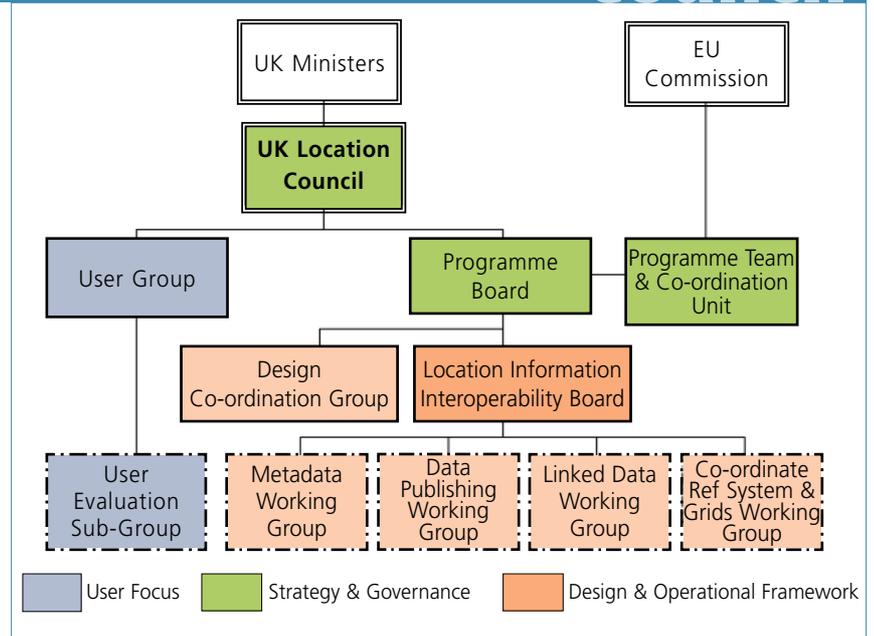
As well as the metadata provisions above, UK Location has sponsored a Discovery and View service as an integral part of data.gov.uk and this will enable any data provider to meet their INSPIRE obligations for these services without any further development although individual providers can still provide their own services if preferred. Linked Data is also being promoted through co-operation with Cabinet Office and OPSI on emerging standards and through the joint publication (with the Chief Technology Officer Council) of 'Designing URI Sets for Location'¹¹. A joint infrastructure approach with the devolved administrations enables data in Northern Ireland and Scotland to be integrated with the UK-wide picture in data.gov.uk and for UK data to be made available in the EC portal.

The UK Location Programme has published a table of all INSPIRE themes and likely Data Providers from the UK. It has engaged with over 30 organisations with some 250 datasets and has convened 'Theme groups' for some of the more complex themes. It also supports data providers and publishers, recognising that some organisations publish their own datasets and others will cooperate or use third party publishers.

The UK Location Programme has put significant effort into engaging with over 50 public bodies which may hold INSPIRE data, focusing on Annex I & II. As a result the programme has identified 33 organisations holding key INSPIRE datasets. The programme has also established UK Theme Groups for most Annex I & II themes to drive forward the delivery of these themes. It has also put significant effort into working with the devolved administrations and representatives of the devolved administrations have active roles in ALL UK Location programme activities.

The success of this work can be seen on data.gov.uk where there are now over 600 UK Location metadata records, providing information about datasets and services. A subset (around 250 of these) relate directly to INSPIRE data as shown in the 2011 INSPIRE monitoring return.

The report states that: *Implementation of the INSPIRE Directive is on course, with standards and guidance published, data providers mobilised across the UK, with most indicating their readiness to publish metadata and make their existing datasets available.*



Visibility Arguably UK Location is still very low profile except to those of us concerned with INSPIRE. This could change if the relevant part of data.gov.uk and other public facing websites are branded appropriately although, by their very nature, location strategies and INSPIRE are background enablers rather than front line services. 'INSPIRE inside' might be appropriate! 'UK Location' is certainly improving its branding but will struggle to get public visibility when the majority of the information with which it deals comes from such strong brands as Ordnance Survey, Land Registry and the Environment Agency.

However, it was the Location Council that decided to make the UK's location data accessible via data.gov.uk alongside other government datasets. This will remove many of the barriers to the sharing of information across all central and local government organisations. But most software and services required to harness the power of location information are likely to be provided by the private sector with proprietary products, or by adding value to Open Source software, as Ordnance Survey has done for the INSPIRE metadata publishing.

During the year, the UK Location website has been completely re-engineered and there have been over 40 events and publications promoting the message that location is a vital element of the majority of databases and applications and that it can be employed to improve service delivery while still increasing efficiency. The Getting Started Guides¹² are aimed at all UK data providers while examples at the domain specific level are the 'cookbooks'¹³ written to assist organisations contributing to OneGeology¹⁴ and as part of Scotland's spatial data infrastructure 'One Scotland'.

The Location User Group is now ensuring that user needs and priorities are recognised and is promoting the location data message more widely. It has members from the public sector, learning and

Above: UK Location Governance Arrangements.



A joint infrastructure approach with the devolved administrations enables data in Northern Ireland and Scotland to be integrated with the UK-wide picture in data.gov.uk. . .



research sectors, the private sector, professional bodies and voluntary & charitable bodies. Issues faced by the 'third sector' have been specifically identified and are being pursued.

The UK's location information governance involves several different groups in order to engage all the different stakeholders and take decisions on a wide range of topics. The Location Council is cross-departmental although chaired by Defra, which is the department where the INSPIRE 'buck' stops. The devolved administrations each have a slightly different approach to location strategy – due to differences in politics, in absolute geography and in levels of devolution involved.

Sharing The existence of common reference datasets does not guarantee their use. They have to be available to all relevant users under terms and conditions that facilitate sharing of the reference datasets as well as 'derived' datasets based upon them. The Location Council therefore welcomed the Public Sector Mapping Agreement (PSMA) which, with the existing equivalent in Scotland, ensures that the whole of the public sector in Great Britain can now share common reference data, and any information derived from it, with much more freedom than in the past. A new Northern Ireland Mapping Agreement (NIMA)¹⁵ was also approved in December 2010 giving access to a range of LPS digital products to all government departments, local councils and non-departmental public bodies.

For England and Wales, the GeoPlace joint venture between Ordnance Survey and the Local Government Group will collate a national address gazetteer for England and Wales which will also enable local authorities to meet their INSPIRE Address theme obligations. UK Location very much supports the coordinated approach on licensing through the UK Government Licensing Framework (UKGLF), developed by The National Archives. It has also published a series of Data Sharing Operational Guidance documents¹⁶. These form the first stage in the development of the UK Location Operational Framework, which will evolve to

cover the current status of licences; harmonisation of licenses by 2012 and development of common rights management & eCommerce web services by 2014.

In terms of sharing knowledge and skills, UK Location is very much aware of a successful initiative in Northern Ireland (see box below) that has been instrumental in providing many civil servants with new, common tools for their day to day work.

Future plans So what about the coming year? The Council intends to review UK Location Strategy in the current context and – in particular – the governance arrangements, the links with other initiatives and the approach to implementation. UK Location will continue to develop the necessary IT capabilities to support data providers and users and enable the UK to achieve INSPIRE compliance. This will include defining the approach to implementing co-ordinate and schema transformations and ensuring that INSPIRE performance requirements are met.

UK Location will continue its programme of communications and awareness raising, including supporting the EU INSPIRE Conference in Edinburgh, contributing to the AGI conference in Nottingham and helping to promote the government's Transparency agenda.

UK Location will therefore respond rapidly and with a sharp focus on developments that are necessary **to meet legislation**, that **have clear policy drivers**, or that **have quantified economic benefits**. Fortunately many developments address all three of these requirements.

Footnotes

- 1 www.ukeof.org.uk/
- 2 <http://ec.europa.eu/environment/seis/>
- 3 www.gmes.info/
- 4 www.earthobservations.org/
- 5 www.lwec.org.uk/
- 6 www.gistrategy.ni.gov.uk
- 7 www.scotland.gov.uk/Topics/Government/PublicServiceReform/efficientgovernment/OneScotland/GISstrategy
- 8 <http://www.agi.org.uk/storage/policy/locationwales.pdf>
- 9 <http://location.defra.gov.uk/resources/discovery-metadata-service/third-party-metadata-software/>
- 10 <http://data.gov.uk/blog/publish-uk-location-discovery-metadata-resources-on-datagovuk-a-simple-how-to-guide>
- 11 <http://location.defra.gov.uk/resources/linked-data/>
- 12 <http://location.defra.gov.uk/resources/getting-started/>
- 13 www.scotland.gov.uk/Publications/2010/05/06161701/0
- 14 www.onegeology.org
- 15 www.dfpni.gov.uk/lps/index/gi/gi_consultancy.htm
- 16 <http://location.defra.gov.uk/2011/03/data-sharing-operational-guidance/>



UK Location very much supports the coordinated approach on licensing through the UK Government Licensing Framework (UKGLF). . .



Northern Ireland Civil Service Training Programme

NICS skills – The NI GI strategy is investigating the possibility of creating a blueprint for delivering and sustaining the necessary GI understanding and skills in the Northern Ireland Civil Service (NICS). The strategy recognises that there is a distinction between specialist GI skills and increasing understanding of GI at a much broader level among all staff. Two of the overall objectives of the strategy are:

- to educate and improve everyone's understanding of the power of geographic information and promote its benefits; and
- to increase skill levels so that everyone who needs to use geographic information knows what they need to know to accomplish this effectively.

NI Assembly usage – The NI Assembly now have a dedicated GI resource in their Research & Library department. This resource is increasingly being accessed by MLA's. An intranet GI system has also been established.

columnist **adena schutzberg**

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BACK IN 1993, James Burke, the historian, author and TV producer, gave the keynote address at the Esri User Conference. I remember it very well. He opened, "I will speak for exactly one hour, so I hope you've all been to the toilet." He went on to explain the difference between data and information. Information, he stressed, is data in context and it causes action. His example of data: "The bubonic plague killed millions of people." His example of information: "The person sitting next you has the bubonic plague." We all got it!

I've been considering that statement as I review all of the maps related to the recent disasters that befell the world's population in the first four months of 2011. The mainstream media, bloggers and technologists produced some stunning and innovative maps to help educate, inform and

epitomes of data in context, causing action?

That's hard to measure in part because so many people see the maps. How could we track if any of those viewers were then moved to action, either right away or some time in the future? I continue to wonder in particular about one type of map that's become popular: the map that includes the location of relevant social media content. I'm thinking of generic maps that gather tweets, video, photos about a topic like an earthquake, as opposed to a specific response effort like Ushahidi's use in Haiti. Are these just eye candy?

Does the media document what maps and geographic data do cause action? Yes, but they are not the types of stories I hoped to read. For example, I read recently about how a Congresswomen from Maine wrote to Google to ask it to more correctly

Do today's news maps cause action? The media is full of great maps observes our columnist, **Adena Schutzberg**. But apart from when they get the location wrong, does it matter whether a map causes action or are they just data?

perhaps cause action in those who viewed them.

Mapmakers tackled the earthquake in New Zealand and as well as the earthquake, tsunami and a damaged nuclear plant in Japan. They mapped existing conditions and predicted future flooding in the middle of the US as well as wildfires in Texas. They tracked and located the landing points of a record number of tornados in the southern US. And they continue to watch the state of the Gulf of Mexico after last year's oil spill.

I'm pleased that the online GIS and geography community takes those maps seriously. Links are always being shared and new ways to capture, analyse and symbolise data are frequently highlighted. Some bloggers aggregate the available maps into a single post so those interested need not repeat the basic searches. The most conscientious among them add to the index daily until the maps stop appearing. My observation is that the Web and newspapers do not seem to be lacking maps by any stretch of the imagination. With today's tools every news outlet can, if it chooses, build its own map or set of maps and many do for almost every event. Others, who chose not to, can and do reprint static or interactive maps from the Associated Press or Press Association or government agencies.

My concern is this: are those maps, those

locate a town in that state since it was losing tourist business based on its erroneous location. It was fixed not long after. During April the US and the world was abuzz about "locationgate," the storage of location data on cell phones (which could be turned into cell tower and wi-fi hotspot maps). That story and the maps created caused action too by congressmen, journalists and even citizens who have brought suit against Apple (and perhaps by the time you read this, Google and Microsoft, too).

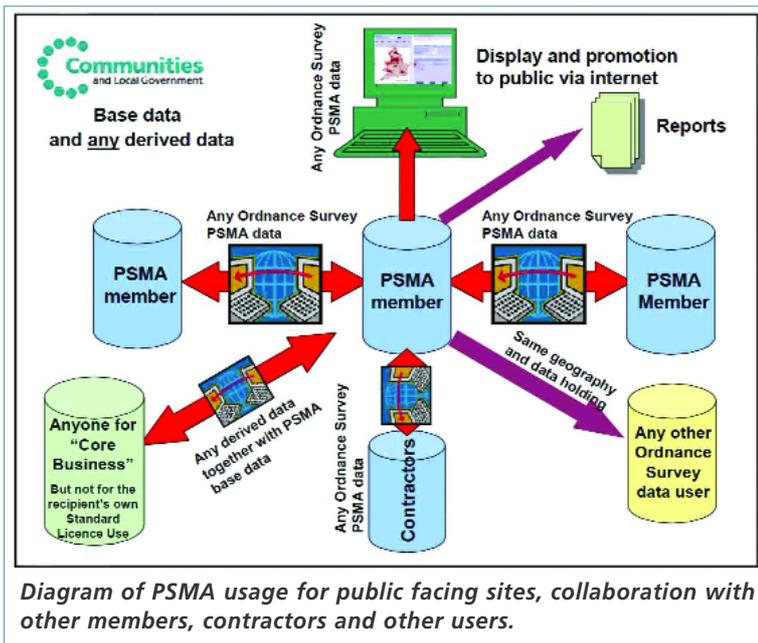
Is there enough dedicated bandwidth in the human brain to act on the maps of natural disasters, food shortages, disease outbreaks and the oddities of Google and Apple et al.? My fear is no. The "big map issues" of the day will continue to swirl around data errors on maps and privacy issues. I am not seeing stories about how a map of say "food deserts" in the US has spawned neighbourhood reactions. I hope I will. The actual stories of the maps, the ones that could engage the reader to action on behalf of others, should make positive change and good news stories.

Clearly, we have the data and we have the tools to put the data in context on maps. What we may not have is the attention of the world's people to look at the maps that matter and act. You can put out a great map, but if it is not seen and does not cause action, does it matter?

“

Is there enough dedicated bandwidth in the human brain to act on the maps of natural disasters, food shortages, disease outbreaks and the oddities of Google and Apple et al.?

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THIS IS NOT AN APRIL FOOL! On 1st April 2011 the Public Sector Mapping Agreement (PSMA) between Ordnance Survey and the Department for

- **Mapping Services Agreement (MSA)** for Local Government and Emergency Services (~480 members)
- **NHS Digital Mapping Agreement** – for ambulance trusts and others – through Dotted Eyes
- **Greater London Agreement** for GLA, TFL and London Development Agency
- **One Scotland Mapping Agreement (OSMA)** for all public sector in Scotland

In early 2010 data.gov.uk was launched and there was a public consultation on policy options for Ordnance Survey. Government response to this consultation included the launch of OS OpenData and the announcement of the intention to negotiate the PSMA. In August 2010 the PSMA transition plan was published and led to the launch on 1st April 2011.

The agreement states that: *"The public sector and the wider economy also benefit from a broad range of value-added services and specialised data provided by the private sector. Public sector*

PSMA – government pays; Ordnance Survey delivers

The new Public Sector mapping Agreement was announced on All Fools Day. But what does it actually mean, what datasets are available and how long will it last?

Robin Waters unravels the small print for us.

Communities and Local Government came into effect. On 12th April the Association for Geographic Information (AGI) hosted a half-day event in London to help system and service suppliers understand the PSMA and how it can help them provide solutions to the public sector. I'll bet there are a lot of companies out there wishing they could sign ten-year deals with government!

customers will continue to require these services outside of the PSMA so it is important that this market is encouraged to thrive". This is the cue for the AGI meeting and the interest of the suppliers present.

It was noted that the agreement will be overseen by the GI Group with an independent chair (recently named as Sir **Ian Magee**) with 6-8 members from PSMA bodies, but not including an OS member. *"The GI Group, through its members and the Secretariat, will engage with public sector users to provide feedback on how the PSMA should develop over time. This will enable the PSMA to meet the current and future GI data requirements of the public sector."*

Products The table (right) shows the Ordnance Survey products that are available through the PSMA and through the prior public sector agreements. Note that OS VectorMap™ Local and OS OpenData™ were not available at the time of the other agreements and also that, due to the formation of GeoPlace (see separate article) the

I'll bet there are a lot of companies out there wishing they could sign ten-year deals with government!

Background Chris Holcroft, CEO of AGI, introduced the speakers and chaired the Q & A session at the end. David Fry and Lars Calvert presented the DCLG view of the agreement and how it fits various government policies such as Transparency, Growth and Localism as well as how it should lead to a much more efficient exchange of information between public sector bodies.

For background there was a brief review of the existing agreements:

- **Pan Government Agreement (PGA)** for central government (~100 members)

National Land and Property Gazetteer will now be marketed by Ordnance Survey as part of PSMA. In time it is intended that the four address products will be replaced by products derived from the national address gazetteer now being compiled by GeoPlace.

There is no PSMA deal for Points of Interest, which is a product of another joint venture and nor is there any imagery or digital elevation models. These are not ruled out for the future.

Terms and conditions PSMA is a centrally funded ten-year agreement (that's right – TEN YEARS!), which enables members to have free access to OS data at the point of use. It applies to central government, local government and all NHS health organisations across England and Wales. It is claimed to enable more effective joint working and to be the basis for creating a collaborative partnership between public sector users of GI and OS.

There is no software included and all 'core' usage is covered. The only exclusions are for competition and commercial gain. All members from the existing agreements can join and on 12th April nearly 90% had done so. Any organisation can join if it is defined as a contracting authority under Reg 3 of Public contracts Regulations 2006.

All town, parish and Welsh community councils can join as well as search and rescue emergency responders – e.g. mountain rescue teams and the RNLI. All schools (local authority and private) can participate via the Edina DigiMap agreement. Other bodies may be able to use the data through a contractor or end user licence when they are working with or for a member of the agreement.

There is a very simple online application form for membership and there are guaranteed service levels. Members report quarterly on their usage.

It is anticipated that the number of users will rise from the initial figure of just over 1000 to something over 10,000 within a few years.

Work in Progress The GI Group chair is now recruiting his members and is consulting on priorities. A member support network is being set up and there are ongoing negotiations for a public sector licence for Royal Mail's Postal Address File. PAF is embedded in all of the address products and Royal Mail's royalties are covered for the first year.

Enabling Licences Andy Wilson, PSMA Manager at Ordnance Survey, introduced the three licences that enable the private sector to make use of PSMA:

PSMA Contractor Licence

- For management of Ordnance Survey data for contract works on behalf of a PSMA licensee. Contractors are required to utilise data supplied by the PSMA licensee.

	PGA	MSA	OSMA	NHS	PSMA
OS MasterMap® Topography Layer					
Landline Residual Rights					
OS MasterMap® Integrated Transport Network™ with Road Routing Information and Urban Paths themes					
1:10 000 Scale Raster					
OS VectorMap™ Local					
1:25 000 Scale Colour Raster					
1:50 000 Scale Raster					
Code-Point®					
Code Point® with Polygons					
OS MasterMap Address Layer 2					
OS MasterMap Address Layer					
ADDRESS-POINT					
National Land & Property Gazetteer (NLPG)					
OS OpenData™ products					
Points of Interest					

Table: Ordnance Survey products available through the PSMA and prior agreements.

Multi Client Contractor Licence (MCCL)

- For management of Ordnance Survey data for multiple PSMA licensees can do so in a more efficient and cost effective way than previously.

Data Management Services Licence (DMSL)

- For development of "Data Management Services" (hosting services) to serve data to PSMA licensees in a more efficient and cost effective way on-line.

Q & A There was a lively Q&A session with several big data and service suppliers present. Many of the questions resulted in the answer that it will be 'up to the GI Group' and several of these concerned the likely provision by OS of imagery and elevation models, which are already delivered successfully by the private sector. It was established that there would be no warranty on the quality or 'fitness for purpose' of PSMA datasets and that extension to Scotland and even Northern Ireland (the latter with different local products) was possible.

It was clear from this session and even as a whole that PSMA is a huge step forward for public sector users and will present many opportunities for the private sector suppliers to get involved. However there are some concerns about 'mission creep' and how the supposed efficiencies of single sources of data may militate against innovation and competition. Although the PSMA is concerned with providing data to the public sector as long as they do not compete with Ordnance Survey or use it for commercial gain, there is no apparent restriction on PSMA datasets from Ordnance Survey or its joint venture partners, effectively driving out private sector competitors. Free at the point of use is one side of the coin; lack of choice may be the other!



... some concerns about 'mission creep' and how the supposed efficiencies of single sources of data may militate against innovation and competition.





Addressing Overview

NLPG	PAF	VOA	AL2
30.6m BLPUs 33.2m LPIs	25.1m DPs (ex PO Box)	24.3m CTax 1.8m NDR	25.1m PAF 0.5m multires 0.1m PO Box 1.2m OWPA
daily release of change only updates	Monthly full re- supply	Monthly release of updates	Six weekly full re- supply

- Task now to synchronise these four data sets (142m records) and put in place an update process
- And of course Scotland (and maybe Northern Ireland)

THE ADDRESS WAR IS OVER. Peace has been declared. Most pundits reckon it is a win-win situation that was conceived ten years ago but for whatever reasons has taken that long to get to the treaty table.

GeoPlace is the joint venture between Ordnance Survey and the Local Government Group set up in early 2011 to acquire the assets of Intelligent Addressing and thereby enable the merging of local government and Ordnance Survey address datasets for the benefit of both public and private sector users.

includes objects other than PAF delivery points and has more attributes.

Local government – and the rest of the public sector – really needed products that could combine the best features of NLPG and the OS products under a single licence that also included any terms required by Royal Mail for PAF.

GeoPlace has been set up to do this and is on course for a full scale delivery of two core products in September 2011 – including, at least for Public Sector Mapping Agreement members, a PAF licence.

Governance The GeoPlace Board has two voting members from the Local Government Association (LGA) and two from Ordnance Survey. LGA also appoint the Chair with a non-casting vote, while Ordnance Survey appoints the managing director who sits on the Board without a vote.

GeoPlace is initially financed by loans from LGA and OS and paying these back is the first call on any operating surpluses. LGA are also responsible for ensuring that local authorities honour their agreement to deliver regular updates from their LLPGs to the central GeoPlace hub. Ordnance Survey are providing financial services, human resources, marketing and distribution. **Richard Mason** is the first MD with an Operations Team made up of people from Ordnance

Peace in our time – or at our place?

With GeoPlace set to deliver two core products later this year, **Robin Waters** was invited to hear more about the new joint venture for addressing.

GIS Professional was invited to visit GeoPlace this month and we would like to thank **Richard Mason**, managing director, **Gayle Gander**, Head of Marketing and **Steve Brandwood**, Head of Services and Engagement, for their time and hospitality.

History Ordnance Survey has had an address product – appropriately named Address-Point – since the early 1990s. This took the Royal Mail's Postcode Address File (PAF) with some 25 million delivery points and assigned 'geocodes' to each one. It is a very simple concept and has been a very successful product for many users – particularly those concerned with direct marketing and with utilities.

In the late 1990s – for political and economic reasons – local government decided to set up its own national address database based on the local land and property gazetteers being created by many councils to the new BS7666 standard. A tender to create and maintain the National Land and Property Gazetteer (NLPG) was won by Intelligent Addressing (IA) on the basis that all local authorities would have free access and IA could market the product to other private or public sector customers.

Ordnance Survey, as part of their new OS MasterMap developed an Address Layer which expanded on Address-Point. Currently Address Layer 2

Survey, local government improvement and development, and Intelligent Addressing as was.

There are about 30 staff members – primarily the pre-existing IA team and they can still be found at an address in Adam Street for the time being. GeoPlace will have a turnover of about £9m. As the products from the national address gazetteer will be delivered to the public sector under the Public Service Mapping Agreement, some (the majority?) of the income will be direct from the Department of Communities and Local Government while OS will market products to the private sector. The legacy address products from OS and NLPG will continue to be supplied by GeoPlace until new products are well enough established to take over.

Products So what about the database and the products? It is still early days. A 'first cut' of the national address gazetteer has been made available and is being assessed by many potential users, consultants and software vendors. GeoPlace aim to have a fully comprehensive database ready in the autumn and already have access, for instance, to all of the corrections made by local authorities as a result of the Census address database matching exercise that took place in 2010. They do not anticipate any significant problems in achieving the goal of a September release.



GeoPlace aim to have a fully comprehensive database ready in the autumn. . .



national addressing

national address gazetteer

So what will we get? Apparently there are plans for two immediate products – a fully configured product to replace NLPG and Address Layer 2 with both UPRNs from the NLPG, TOIDs from OS MasterMap as well as Royal Mail delivery points and Valuation Office codes. There will also be a second, 'stripped down' INSPIRE compliant product – effectively replacing Address Point. Ordnance Survey will be the sole distributor – though these products will presumably re-surface in various value added forms from other companies. Note that Scotland is not covered by the current NLPG although it does have the OS products and its own address gazetteer. Negotiations are apparently in hand to include all Scottish addresses. Northern Ireland has the common PAF but otherwise a completely separate COMPASS database based on different mapping and the Irish grid.

Initially all PSMA users will be covered by a single joint PAF licence. Other users will still have to deal with Royal Mail but there are ongoing negotiations to try to incorporate a PAF licence for new products.

Streets ahead GeoPlace is also taking over the custodianship of the National Street Gazetteer but there are no immediate changes required although there are certainly some thoughts about how best to integrate NSG with OS MasterMap Integrated Transport Network in the future.

• Data inputs

- **LLPGs** primary source
40k new BLPU's per month
1.8m updates / corrections per month
- **PAF** 25-30k new delivery points per month
+ change intelligence (Postcode, organisations)
- **VOA** 8-10k new Ctax and 5-6k NDR records per month
+ change intelligence (classifications)
- **OS** 4-5k new (non PAF) records per release (6 week)
+ change intelligence (grid co-ordinates)

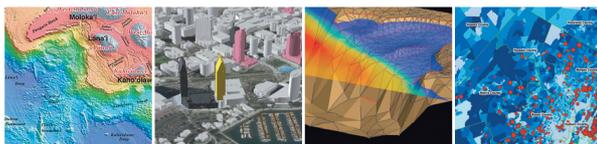
For now, Richard Mason is aiming to bring the first address products to market and then manage customers through the migration from the existing products. While there may be several outstanding questions about the overall terms of the PSMA (see page 16) and the costs for the commercial and non-profit sectors, there is no doubt that GeoPlace and the national address gazetteer (note deliberate avoidance of capitals) represents a huge step forward. The combination of dedicated LLPG and NSG custodians in local authorities and the comprehensive and consistent mapping from Ordnance Survey will provide a fully featured and geocoded address database that will become the fundamental building block of the location reference framework for the country. One could say that we are 'streets ahead' of many of our continental neighbours. We wish GeoPlace well!

UNIGIS

Study for a postgraduate qualification in GIS by distance learning

UNIGIS is a partnership between Huddersfield, Manchester Metropolitan and Salford universities that delivers postgraduate GIS courses by distance learning. With over twenty years experience, and as a founder member of the prestigious UNIGIS International network, we provide high quality courses that meet the requirements of busy GI professionals and of those seeking to enter the GIS industry.

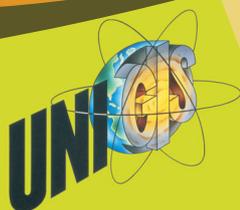
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conference report



Representatives from Esri UK were on hand to show delegates the advantages of taking a geographic approach.

"NEW APPROACHES FOR OUR CHANGING WORLD" was the theme that Esri UK ensured was fully explored at the company's 2011 user conference. Across two days, delegates stormed the conference rooms of the Hilton London Metropole hotel to attend streams that reminded everyone of the breadth of GIS. The message was clear: the speed of change is relentless and businesses must adapt with it. Of course, this message alone isn't enough; we've heard it many times! Representatives from Esri, the public and private sectors, plus the military, health, insurance and other sectors, came with examples of how their organisations have gained a strategic advantage from taking a geographic approach.

In his welcome, **Richard Waite**, MD of Esri UK, told us that socially, politically, economically, internationally, globally, change is inevitable. His children live their lives through social networking – 'if that's not a social change, what is?' For businesses operating in 'the collective world of GIS', Waite says that offering customers the same for less is good but "better for less" is great. We need to make GIS easier

Geography is now fundamental in understanding risk and is growing in influence. However, he makes the novel point: 'Geography will become a combat sport' as things are only going to get more competitive.

Major **Andrew Williams**, 42 Regt Royal Engineers (Geo), Joint Aeronautical and Geospatial Organisation (JAGO) is Officer Commanding of 16 Geographic Support Squadron, which provides systems, software and data management support to defence GIS operators worldwide. Major Williams explained that the regiment's problem was the common issue of data management – they needed 'the whole world mapped on one globe' rather than multiple copies of the same data. JAGO's answer was to develop the DataMan GIS containing a single authoritative version of data at deployable level and providing the means for a simple visualisation tool. Deployed in March 2010, the success and scale of customer interest took them by surprise, said Major Williams. Lessons learnt include the need to encourage users to think geospatially and to use common open standards for visualisation and dissemination of all location-based services.

Esri UK conference: 'a deep dive into GIS' *GiSPro*

attended Esri UK's annual conference with **Hayley Tear** covering both days and additional reporting from **Stephen Booth** on day two.

to access, probably by moving online, but making it easier to use is 'the bigger challenge'. He concludes that 'we don't need to defend GIS; it's a positive thing', we need to better articulate its benefits.

The plenary agenda began with **Julie Pierce**, Animal Health & Veterinary Laboratories Agency (AHVLA). An executive agency of Defra, AHVLA's business problem was working with many diverse systems across Defra containing valuable data on livestock keeps and holdings. But with systems often out of date, unable to "speak" to each other, and with significantly less funding, any solution needs clear benefits or it faced rejection. The agency is now on the verge of delivering a new GI capability, which will pull data together from different systems as layers in a GIS. Users will have a better spatial understanding of data using maps to view land and give accurate information efficiently when talking to farmers. Pierce explained that agency users can now generate maps quickly without specialist GI expertise and a web-based solution reduces reliance on expensive machines and licences.

Rowan Douglas is a board member of Willis Re, a reinsurance broker, and chairman of the Willis Research Network (WRN), a collaboration between academia and the finance industry that aims to understand and model the frequency and impact of extreme events. He argues that we are living in a modelled world, 'everything is mediated through models – it's pervasive'. He believes this to be a recent development with the maturing of risk modelling after events like Hurricanes Andrew and Katrina.

Charles Kennelly introduced the Esri plenary by arguing that the growth of technology is racing ahead, and GIS is racing with it. The Esri vision is to 'extend GIS to make a better world' and so ArcGIS has to have depth for GIS professionals as well as IT professionals, developers, citizens, decision-makers and managers. The upcoming ArcGIS 10.1 will feature a core 64-bit server and new functionality including: increased speed; simpler, optimised architecture; publishing to the cloud; and simple web-printing.

Walking with the Wounded Then there was a remarkable session. Walking with the Wounded is a charity to help wounded ex-servicemen which recently saw a group of disabled servicemen trek unassisted to the North Pole, experiencing temperatures up to -40°C. **Ed Parker** was inspired to organise the challenge when his nephew lost his legs serving in Helmand with the (successful) aim of raising £2 million to help re-train and re-skill wounded soldiers. One of 'the boys' who undertook the challenge with Parker was **Martin Hewitt**, whose right arm was paralysed after he was shot in the shoulder and foot in 2007. The camaraderie between the two speakers plus an inspiring video of the trek, made this session a clear favourite with delegates. Parker's message was the importance of understanding the environment 'whether shopping on Oxford Street or on duty in Afghanistan!' But the most important factor to success, he argues, is mental strength – something a group of wounded ex-servicemen and women will demonstrate once again next year when they will climb

“

... everything is mediated through models – it's pervasive.

”

Mount Everest. If you would like to support them, the website is www.walkingwiththewounded.org.uk

Finally, **Michael Palin**, President of the Royal Geographical Society, demonstrated the same enthusiasm for geography that he displays in his travel programmes. For Palin, it was maps and a good geography teacher that sparked his imagination at a young age when he was curious not just about where he was in the world but where he could go. He argues that geography 'is the most relevant of subjects' as so many issues come back to a knowledge of the world. But it must be taught with enthusiasm, it 'mustn't become a grey subject, it's multi-coloured!'

Day two brought the dilemma for your reporters of choosing between seven tracks. What follows reflects their personal choice from 50 separate presentations.

Game changer? The influence of computer games on software in the real world has been growing for sometime. Some observers believe that the commercial world will only get the benefits when the PlayStation generation comes of age. There are however pockets of professional activity that are reluctant to adopt tools that can help them move from the 2D to the 3D world. One such area is architecture and planning. After tracing the history of computer games with buildings (simple blocks to be bombed on a Vic 20 PC), **Elliot Hartley** showed how 3D and GIS tools can be used very effectively in planning a city.

You create a grid, edit it depending on your terrain model, add street lights, leave green spaces, add utility grids, deal with obstacles, etc. The basics can be done very quickly according to simple rules in the software leaving the heavy stuff for detailed analysis. Using CityEngine, he did in a few minutes what might have taken several days in AutoCad. Hartley's company, Garsdale Design, is getting EU funding to develop their ideas further. They have already been involved in the planning of Nazaria in Iraq.

City planning is an unusual application for ArcGIS but a very appropriate one where analytical tools can be put to good use as well as feeding data into BIM (Building Information Management) in an area for which GIS has yet to make deep inroads (for more, see also GiSPro February 2011 – "GIS and engineering – good practice").

GeoDesign emerges from the forest A further evolution of this approach, but one where the platform is already very mature, is the Forestry Commission's use of the emerging concept of GeoDesign for asset management. The Commission is responsible for managing 12% of Britain's land mass and produces 45% of the UK's timber, explained **Tony Farndon**. Other statistics from the organisation are also rather startling: they have five times the length of roads as the entire motorway system and are responsible for around 3000 bridges.

GIS has been around in the Commission for a long



time but today is used extensively to empower and encourage users to drive the business spatially. Farndon argues that GeoDesign is geography and geospatial coming together through design.

Coal, mapping and an AK47? In the Geo-Futures Insight track, **Lisa Thomas**, The Coal Authority, focused on a project to raise awareness of coal mining legacy in the UK before wider publication of data to the public domain later this year. Around seven million properties lie within coalfields – imagine a mine collapse at your front door, under your house or near a school. Although rare, these incidents are high risk yet uncontrolled release of sensitive information could result in mass panic or a media outcry, said Thomas. The authority is raising awareness through collaborative asset monitoring before public release and the project involves a geographic information exchange programme with over 200 public and private sector organisations. 'It's about working smart,' concludes Thomas, keeping other organisations informed of the risks from past coal mining so the data can be delivered safely to the public.

Next, **Dave Russell**, Ordnance Survey, spoke on the future direction of the UK mapping agency remarking on a dramatic 'year of change'. Objectives include: talking to customers to move forward with 'a user centred product lifestyle'; defending and retaining market share of the UK geodata market; and meeting market demand for integrated content by growing a recognisable portfolio. For emergency services, Russell highlighted the importance of 'vernacular geography' as an area that needs developing as location descriptions 'reflected in people's language'.

Following a successful year for the open data community, **Steven Feldman** warned delegates that now 'perhaps we need to pause before we map'. His presentation was billed as 'Open Data – is it like giving a kid an AK47?' So, does raw data aid understanding or does it need interpretation? The answer is clear, says Feldman, but are people qualified to interpret – could they be wrong? As an example, he used Police.uk to look up crime in his area of London's Muswell Hill – it turned out to be a higher rate than matched his experience. Further examination found that, for privacy reasons, crimes were not pinpointed to a property on the map but to an anonymous point on a nearby road – but what if you live on a long road? The data can be downloaded but might you forget that points are anonymous? Or

An accompanying exhibition of partner companies attracted over two dozen stands.



conference report



Esri UK MD Richard Waite thanks conference organiser Judith Pugh.

might the data be re-published by someone who hasn't interpreted the data correctly? An advocate of open data, Feldman nonetheless argues 'just giving out data isn't enough' as it won't be useful – it requires experts who understand how to analyse data.

Technology: recreational v. the professional user

In the technical track, **Richard Gauchwin**, KOREC, argues that favouring professional GNSS equipment over consumer grade GPS for GIS data capture often results in considerable savings. Professional devices provide enhanced satellite signal accuracy, allowing differential corrections; GNSS and Glonass as well as Galileo when it becomes available, for hard to reach areas like tree canopies. Gauchwin highlighted common misconceptions like: "I can get sub-metre accuracy from my recreational GPS" – no, you would need some differential positioning, plus consistency would be an issue; "I can get two recreational devices for the price of one professional devices" – but would they be as reliable and provide you with a good service for your money? Professional and recreational GPS are simply designed for different purposes, he concluded.

Online or dot com? The introduction of ArcGIS.com was announced last year and is Esri's platform for the emerging world of cloud computing. It should not be confused with the longer running ArcGIS Explorer Online, which is run behind an organisation's firewall on an intranet. Nevertheless, ArcGIS Online can host ArcGIS.com as an app. ArcGIS.com is essentially an open portal where users can register and access a limited range of GIS tools (e.g. routing, geocoding) explained **Peter Wilkinson**, as well as using Esri's growing portfolio of world mapping or draw in datasets such as gazetteers from the cloud to create and share mash-ups.

Increasingly, Esri is storing and maintaining datasets for customers. OS OpenData, for instance, is promised to be available very soon with Mercator or OSGB grids. Significant new capabilities are also promised when ArcGIS 10.1 arrives, allowing publishing to the cloud and online storage within a hosted ArcGIS server.

While these are exciting developments and will empower many new users of GIS and geospatial, amongst professionals there remain very real concerns about provenance, currency of data and suitability for purpose. Not for nothing do GIS and surveying courses include an introduction to the complex world of geodesy.

Freemium and the ...aaS model The arrival of cloud computing means that with the maturing and increasing robustness of the web, apps can be served up on demand for instant use. Software as a Service (SaaS) has arrived. But what about PaaS, IaaS and DaaS? These bizarre acronyms stand respectively for platform, infrastructure and data as a service. **Ed Boiling** is a solution architect and explained that already Esri has been using IaaS to harness the computing power of the web for geoprocessing.

Processing an OSMM cache uploaded through Amazon Web services took eight days in the cloud; processing offline would have taken six weeks.

Data as a service is very much in its infancy. Esri has a beta program using a 'freemium' model to access OS OpenData and other customers' datasets as well as those covered by the Public Sector Mapping Agreement (PSMA). It requires tools to monitor usage so that OS and others know how much and for how long it's being used.

For Esri, SaaS will not be a single app but a series of application geo-templates based around their LocalView Fusion, a product aimed at local authorities that allows integration with back office systems such as CRM and NLPG. The 'raw power' of the cloud, argues Boiling, enables you to easily scale up.

Scaling up or down, the market for SaaS is expected to grow rapidly in these cash-strapped times as organisations opt for a "pay-as-you-go" model. But Esri's **Dave Bayer** believes that it's more about the connectivity now available. 'We're always connected to the Internet wherever we go' he says. 'Many small, medium and large businesses will be doing GIS solely online' because there is quick access to solve problems with geography. Esri's strategy will be to focus on enterprises that demand security, reliability, ease of use, self administration and technical support in addition to rich geospatial apps and data. 'The first four in this list' says Bayer, 'are about IT as a service.' While Esri's long-term goal is to be able to do everything online, GIS professionals and integrators will continue to need ArcGIS as a desktop app.

Updating in real time Esri UK's chief technology officer, **Charles Kennelly's** presentation on Real Time GIS used the very latest in cutting edge technology: a flip chart and felt marker! He argues that many organisations are treating their maps as fixed base data. They collect survey data, edit it, run QA, process it and produce a map which is regarded as fixed. He wants to encourage users to focus on the process so that models can be updated in real time. By doing this they will be able to get quicker analysis and be able to explore 'what if' queries.

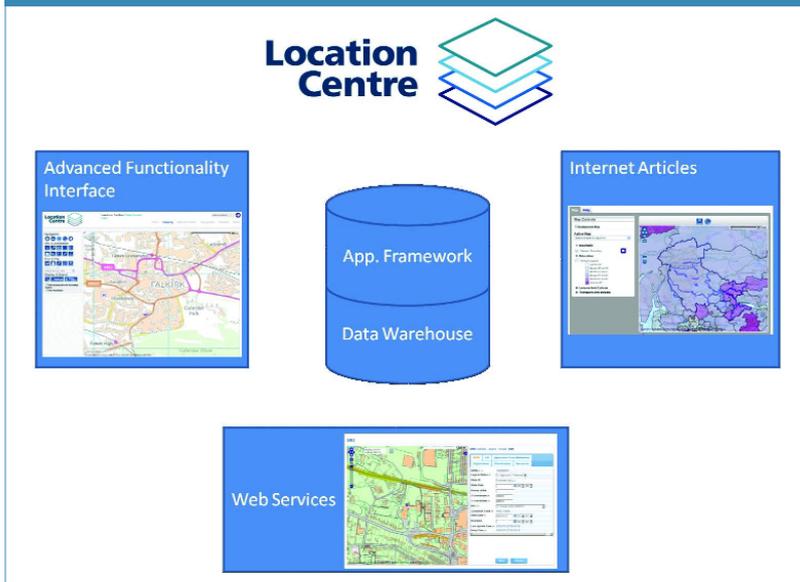
While the potential is clearly vast if users do this, the key, says Kennelly, is making all data fit for purpose plus good QA and applying business rules to the data capture so that shapes or things that cannot exist logically (e.g. a polygon with two lines that cross) get highlighted. His vision is of a cost model for a road where the price automatically rises as a drawn line passes through a forest. 'You can devise a system that incorporates all your business rules so you make better decisions' says Kennelly.

Summing up two days of intense but stimulating conference Esri UK CEO Richard Waite balanced the first day's plenaries against the second day's 'deep dive into GIS'. 'GIS delivers simple solutions in a complex world – but it can also produce very impressive applications. It needs to be simple, easy to access and use and with the power to unify legacy data.' Amen to that.



Software as a Service (SaaS) has arrived. But what about PaaS, IaaS and DaaS?





Above: The Location Centre model.

I RECENTLY RECEIVED a free smart meter from my electricity supplier. It took a few seconds to install and I can now go online to view my consumption over any period. Through the web portal, I can easily monitor and review how much electricity I'm using at any time. I can analyse patterns and trends; compare my usage with similar properties; and identify when and how to reduce consumption and improve efficiency.

staff, complex technologies and costly data are rapidly disappearing. We now have a combination of readily available, high-speed internet access, convergence with mainstream IT, increased use of Open Source technologies, more open or free data, and the widespread availability of consumer GIS (Google Maps, Bing etc.). Furthermore, with the opportunities now presented by the cloud, we can concentrate on the integration and more innovative use of geographic data and services.

GIS as a Service There is growing interest in the provision of hosted, managed GIS services that reduce or remove the requirement to invest in a local spatial data infrastructure. Such services can reduce or even eliminate the costs and dependencies of building, operating, managing and maintaining hardware or operating system and software components at multiple sites. Customers of a hosted service can simply access GIS data and full function applications over the internet using a standard web browser – whenever and wherever they need it – without having to worry about building or maintaining the service.

Online, on-demand solutions are becoming highly scalable and provide customers with the flexibility to increase or decrease users and data

Power to the People! With the need to save costs and improve efficiencies growing, spatial technologies are more relevant than ever. And GIS as a Service can transform the way organisations operate by allowing us to monitor and control our own use of scarce resources, argues **Alan Moore**.

So what's this got to do with GIS and spatial data? Public services are struggling to find efficiencies and cut costs. The private sector is seeking to improve competitiveness and market share. The use of spatial data and technologies is more relevant than ever before, especially if it can be made available to everyone. The use of spatial information empowers organisations, communities and customers. They can improve decision-making, increase collaboration, simplify relationship management, and enhance co-ordination. All of these help save costs and increase efficiency.

So potential demand is high and will continue to accelerate. But has the supply of GIS services become more affordable, more accessible and as user-friendly as my smart meter? Are GIS practitioners still too focused on the back office?

Evolution Traditional barriers associated with GIS implementation, such as long lead times, high costs and the technical complexities and risks involved, prevent many organisations from adopting GIS or realising the potential business benefits.

The days when GIS was seen as a specialist, back-office domain requiring significant investment in expert

volumes in line with demand without the need to purchase processing power or multiple software licences that they rarely need.

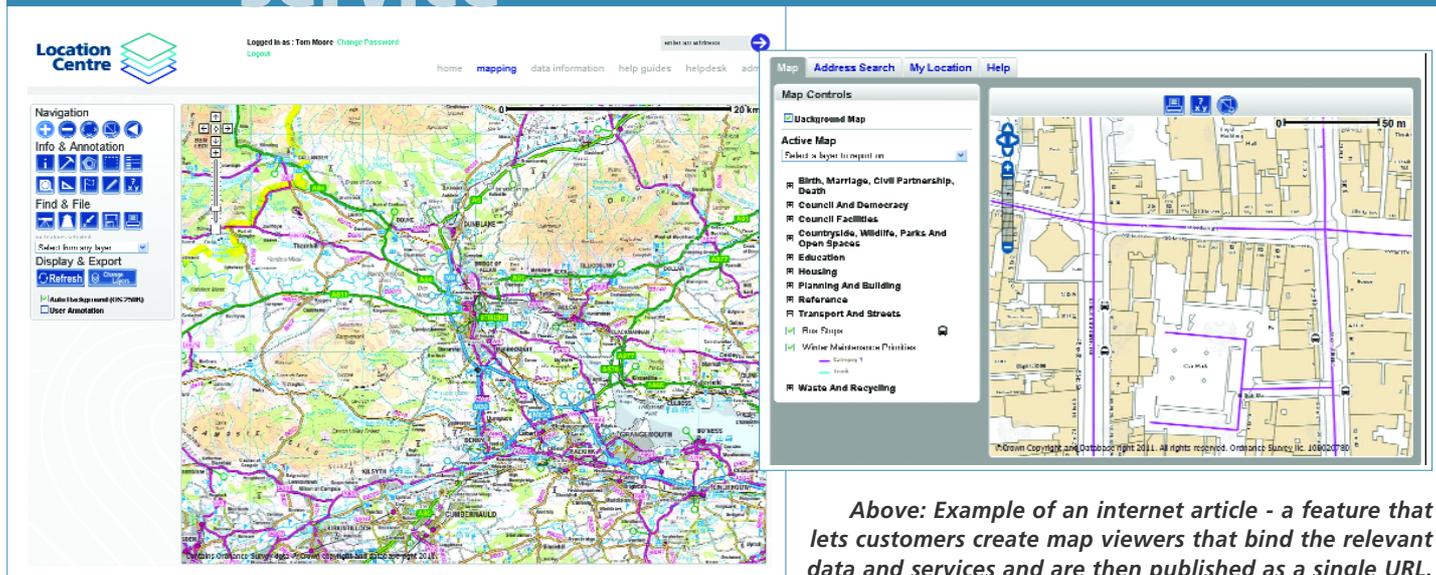
Costs are easily managed with minimal initial outlay and with predictable revenue costs from the subscription payment models now adopted by most suppliers. It is estimated that the total cost of ownership for a typical local authority could reduce by up to 60% over five years compared to building and maintaining a traditional GIS installation. Similarly, small and medium-sized businesses benefit from dramatically reduced entry cost and lead times for their own GIS.

Customer Value In parallel with the evolution in technology, GIS customers are demanding more for less, with their expectations of service, systems and quality higher than ever. To meet these expectations we need a transformation, not just in the way the technologies and solutions are delivered, but also in the way we address customer value.

So what factors will influence customers when they make an informed choice of GIS services in the future?

“
... total cost of ownership for a typical local authority could reduce by up to 60% over five years compared to building and maintaining a traditional GIS...
 ”

GIS as a service



Above: Example of an internet article - a feature that lets customers create map viewers that bind the relevant data and services and are then published as a single URL.

Above: Location Centre is a "GIS as a Service", providing GIS capabilities when and where it is needed.

- **Cost** – will continue to be a key element. We are just starting to see the rapid growth of competition to deliver hosted geographic data services. As a result of increased competition, we are already witnessing significant changes in pricing models and lower charges that will lead to cost savings and increase internal efficiencies for many customers. How long before we see a "gocompare GIS" or a "uSwitchGIS", with the customer enabled to choose a solution and supplier as easily as an insurance product or an energy supplier?
- **Convenience** – customers need GIS to be convenient to access and use, whether in the office, at home or on the move, with consistent and ready access to the data and functions needed at any particular time or place.
- **Customer Service** – in future customers will be very different – they want fewer technically informed users but many more non specialists able to access, use, integrate, share and publish with the confidence of a reliable, predictable, managed service. What really matters will be transparency in service performance and demonstrable added value to business-wide strategic targets, customer engagement and top line impact.
- **Content** – reliable, current, secure, and accurate datasets will command a premium as long as access to, and sharing of, those datasets is technically and administratively hassle free. The move to hosted data services for a growing range of third-party mapping datasets will mean that customers can focus on improving the management and linking of their own business data with geographic data to provide real spatial intelligence. Expectations are growing that the management, update and integration of data content will be "self-service" and online. Customers will expect to use GIS information sharing as a link for other business content within and between organisations.
- **Context** – services need to be customer-centric, enabling differentiation between users, groups and roles, making it easy for customers to present GIS online in a way that meets a range of individual, organisational, partner and customer preferences. Solutions need to be flexible and capable of easy integration with key business systems but with minimal reliance on technical experts. Publishing and sharing geographic information needs to be context-sensitive, with general purpose web GIS solutions making way for solutions that are easily configured to provide different stakeholders or different application interests with only the data and functions they need.

Location Centre Given this scenario, Forth Valley GIS recently launched Location Centre. This provides "GIS as a Service", combining the infrastructure, data and software into an online service that provides easy to use and powerful GIS capabilities, whenever and wherever it is needed.

Location Centre is built upon an integrated service framework that provides customers with the full range of on-demand GIS capabilities to meet business needs. This includes:

- **A functionally rich web GIS browser** that also incorporates context-sensitive business applications ensuring that customers only gain access to the tools and functions they need. With extensive user and role management functions, this means the browser can easily be deployed into multi-agency, multiple stakeholder initiatives and directly enable online collaboration and information sharing with guaranteed data security and integrity;
- **Web services compliant with INSPIRE & OGC standards** to stream customised spatial data services for use in other business systems or web applications as well as the ability to consume and view web services from other providers;
- **Internet articles** – a powerful feature that lets customers create simple or complex map viewers, or

“ . . . services need to be customer-centric, enabling differentiation between users, groups and roles. . . ”



spatial reporting tools, that bind the relevant data and services and are then published as a single URL. Context sensitive web mapping and spatial tools can then be embedded into customer's websites and web applications, including any content management systems, by simply linking via the URL. This enables the rapid deployment of context-sensitive spatial intelligence without the need for any GIS or technical experts.

enhanced with a close eye on developments in other sectors in which on-demand services – and a focus on customer value – are already well developed.

For customers, the move away from “doing” GIS internally to “using” GIS is a significant cultural shift, especially in the public sector, which has a long tradition of building and maintaining expensive GIS infrastructures. The potential prize is well worth the effort. Moving to GIS as a Service will lead to much needed rationalisation of existing efforts so that specialist GIS resources can focus on how to use GIS to improve services.

Location Centre is delivered from a “private cloud”. This provides customers with control over where the data is stored, how it is managed and what data is shared. At the same time, it provides the benefits of flexibility, scalability and cost savings promised by the cloud. The whole framework is built on open source technologies – partly to keep costs down and partly to exploit the opportunities for rapid development and collaboration with a global development community.

Challenges So what challenges lie ahead? For GIS suppliers, the challenge is the speed and agility with which they transform their traditional delivery channels and associated licensing and pricing models as well as how they achieve successful differentiation in a very crowded market. The benefit of “GIS as a Service” is that solutions can be continually

Conclusion GIS as a Service will completely transform the way organisations operate. For those who already have GIS, it will streamline and simplify the infrastructure, increase access, reduce costs and increase efficiency. For those that don't, it provides a low-cost, low-risk approach to implementation that breaks down the traditional barriers to entry and equalises opportunities for all sizes of organisation. Either way, the focus shifts to using GIS as a smart technology to deliver real business benefits and achieving customer value without compromising on cost, functionality or quality. Just as with my smart meter, we will all be able to control our own use of the technology and the data from a browser on our desktop.

About the author
 Alan Moore is the Chief Executive of Forth Valley GIS – a provider of Geographic Information Solutions that transform the way organisations operate. Alan has worked in the GIS industry for over 25 years, fulfilling a range of technical, operational and management roles with Ordnance Survey, Central Regional Council, Clackmannanshire Council, West of Scotland Water.

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innovation showcase



Before the pitching began, our reporter chatted with the finalists.

GEOVATION IS ORDNANCE SURVEY'S word for innovation in mapping. The initiative started with 'Terrafuture' in February 2009 and evolved into GeoVation. The process is straightforward. The innovator starts with an idea. He, she or they post the idea on a forum on the Geovation website. The judges then select the ideas that they see as most promising and invite the innovators to a weekend 'GeoVation Camp'. Following the weekend, the judges then whittle down the numbers to a select few who go forward to the 'GeoVation Showcase'.

seconds each. It's a method that favours conciseness over waffle! OS provides facilities and food during the day but overnight expenses and travel are down to the competing teams. Even those teams who did not make it through to the next round seemed to find that the weekend was well worth the cost as a development opportunity and all-round learning experience.

Showcase winners Following the Camp, the judges selected nine ideas to go forward to the next round, the GeoVation Showcase, which took place on May 4th. The shortlisted teams were again required to sell their ideas and answer questions in closed sessions with the judges and then presented to the attendees in five minute Pecha Kutchu talks.

The most enthusiastic presentation came from **Mission Explore**. This is an idea set up by a group of geography teachers called the Geography Collective. The collective's aim is to engage and inspire children through geography. The team are not new to GeoVation, as they were winners last year. Their basic product is a series of challenges for kids: challenges

GeoVation Challenge: 155 into 6 will go!

Richard Groom has been following the second GeoVation Challenge in which six winners were eventually selected from 155 entrants.

Improving transport This group of innovators were responding to the second GeoVation Challenge: *How can we improve transport in Britain?* They submitted their ideas to the forum, which is more than just a means of submitting ideas. Each idea attracts comments and discussion threads with participation from other innovators or third parties. By the time the closing date came round, 155 ideas had been submitted. The judges selected twenty of these to take part in a weekend GeoVation Camp, which took place in 25th/26th March at the OS's new HQ building at Adanac Park, Southampton.

GeoVation camping During the weekend, the teams of idea owners worked through their thoughts, in a cycle of plenary sessions and workshops. The process is logical. The teams start with the problem. What is it? Why is it a problem? Is there already a solution out there? Then they study their solution and how to execute it including prototyping. What's the process? How will the interface with the user look? For the GeoVation Camp, OS invited experts to help the teams in areas where they might not have ready access to assistance, like software development, marketing and monetising. During the Sunday afternoon, each team had a session with the judges and the weekend wound up with two-minute pecha kucha presentations of each idea to the whole group. Pecha Kucha is a Japanese idea. For the two-minute presentations each presenter had six slides that were displayed automatically for 20

that take them away from the internet and into the great outdoors to have fun exploring and learning. The challenges are listed on their website, www.missionexplore.co.uk. Mission Explore make a point of encouraging children to think of their safety whilst also being bold and adventurous when undertaking the challenges. It is refreshing to see kids being taught health and safety with a large dose of applied common sense. Users can rate each challenge and, although the idea is undoubtedly inspired, many of the challenges have not yet been rated.

For the GeoVation transport challenge, Mission Explore teamed up with Sustrans to promote cycling for children on the national cycle network. This is work on the long haul towards behavioural change and their reward was £36,500 of seed funding from GeoVation plus matching funding from dairy company Arla. They also won an additional £1000 for being voted the best idea by attendees at the Showcase.

The other big winner was **myPTP**. This is the brainchild of www.liftshare.com. Liftshare has been operating for nearly a decade and is the largest car sharing website in the UK. As ideas go, this one is right up with the most inspired. Liftshare is web-based, but their award of £36,500 will go towards developing a mobile phone application that will make lift sharing a near real-time possibility. They are aiming the service at large organisations who will pay a fee, as they presently do with the web-based service. Having developed the smart phone application, they will trial with a number of



Even those teams who did not make... the next round seemed to find that the weekend was well worth the cost as a development opportunity...



organisations. The pilots will be complete this year and the service will go commercial next year. The geography in this idea is route matching core of Liftshare and, as with several of the ideas that made it to the Showcase, the idea revolved around developing a smartphone mobile interface.

"FixMyTransport – Anywhere" was awarded £27,000 of GeoVation funding that will go into developing a mobile interface for a web service. The FixMyTransport web-based service is under development by mySociety, the organisation that brought us FixMyStreet and TheyWorkForYou.com. FixMyTransport is a means of bringing problems to the attention of the people that can do something about them. The system is map-based, so that if there is a problem with, for example, a bus shelter, the user can click on the shelter and, from its location, the local councillor in charge of transport, the local MP and so on, are identified from underlying polygons. As with myPTP, the mobile interface will make the service a lot easier to use and will enable it to operate in near real time and thereby expand the potential market.

Cyclestreets also left with a cheque for £27,000. Their aim is to enable more people to cycle more often. They see the problem as unfriendly streets and decided that the solution is to empower cycling advocacy groups to press for improvements in cycling infrastructure. The principle behind the idea is similar to FixMyTransport in that users spot a problem and report to a campaign group via Cyclestreets' website.

The third recipient of £27k was **"@ccessAdvisor"**. This idea was presented by Neil Taylor of Integrated Transport Planning Ltd. They will be setting up a system that will give disabled people the information they need to get around the transport system. They will collate existing data sources as well as crowd-sourced information. The money will go towards a workshop, provision of data and development of an API.

The final organisation given the thumbs-up by the GeoVation judges was **London Cycle Map**. Their aims are similar to those of Cyclestreets: they want to make cycling in London simpler and safer. When you compare cycling rates in London (2%) with the Netherlands (26%), there is clearly a mountain to climb. Dr Ben Irvine is the driving force behind the map. He has identified dozens of cycle routes across the capital and has produced a map on which each route is colour coded according to its rough direction and numbered as odd or even incrementally away from the centre of the map. The next stage is to mark the routes on the ground. Irvine has considered signposts and marks on the streets and prefers the latter. Transport for London are not yet convinced that this is the way to harmonise cycle routing in London. This lack of support prompted one judge to suggest that, rather than needing a pilot study, London Cycle Map needs a lobbyist. The boroughs are keener and the pilot study should take place in Lambeth, Southwark and Lewisham.



... and runners up There were three unlucky runners up. James Swanson presented his **"Sustainable Mobility Platform"**. He is aiming his product at large employers who have to report on the carbon dioxide produced by business miles. It is this that differentiates Sustainable Mobility Platform from existing integrated transport planners. Swanson's weakness was in not having identified his data providers although he did have a clear idea about how to set up a pilot in Manchester.

"Parcel Tracker" is an idea from an SME, Abby Couriers. They plan to run a pilot in Basildon, Essex. The problem they identified is that 30% of parcels are not delivered at the first attempt, together with the hassle involved in collecting the parcel from a depot that could be far away. They would have used the money to build a mobile map-based platform to co-ordinate deliveries when the recipient is at home. When questioned, it turned out that the "30%" figure was actually "up to 30%", which meant that their cause lost some credibility.

"Our Meeting Point" was presented by Kate Pangbourne from the University of Aberdeen. Her idea is intended to reduce travel time, cost and CO2 caused by attending meetings. This idea seemed to have more geographical content than many of the others and, although the presentation went well, the answers to questions were more hesitant. Between the GeoVation Camp and the Showcase, it appeared that the idea had developed from one that would just find location to one that would search for venues as well. For some reason one got the impression that this was seen as a weakness.

The rest of the afternoon was taken up with updates from the previous winners and an awards ceremony followed by drinks and networking.

The innovation funding for GeoVation's second challenge came from Ideas In Transit (£150,000) and Ordnance Survey (£10,000 for the best use of OpenData). For more information, visit www.geovation.org.

The next challenge has not yet been announced. If you have an idea GeoVation is an excellent way to see how far it will go. And you never know: this time next year you could be a millionaire!

An enthusiastic presentation from Mission Explore's Daniel Raven-Ellison was rewarded by £36,500 of funding, plus £1000 after winning the Community Award, as voted for by the audience.

If you have an idea GeoVation is an excellent way to see how far it will go.

report Where 2.0



A presentation from Blaise Aguera y Arcas, Bing, really showed that Microsoft has big plans for location.

Image: © copyright Andy Coote.

IN SILICON VALLEY-SPEAK “going south” is what we might refer to as “belly up”. Conversely, our users have moved “north” of 1 million, means they now have over a million users. Where 2.0 moved geographically about two miles north this year to Santa Clara but the evidence is that it moved a “long way north” in terms of investment.

Significant announcements at the conference included the sale of Where, a start-up little more than two years old specialising in indoor positioning, to eBay for a rumoured \$150m and \$25m first round investment

of Factual, who has experience with start-ups in both UK and US markets, put it in a nutshell: “in UK, investment is run by bankers who are only willing to give you money when you don’t need it (after the proposition is proven), whereas silicon valley investors are usually successful entrepreneurs looking for the next big opportunity.”

After four years of attending the conference, I think I’ve finally got my head round one thing. It is about B2C and C2C applications, whereas the vast majority of mainstream GIS conferences are focused on B2B applications. This is of course a gross oversimplification - there are obvious crossovers. Google Enterprise is taking technology designed for B2C into B2B with Google Earth touted as the corporate geodata repository and ESRI’s recent positioning of ArcGIS online as a consumer tool.

That’s enough philosophy. Let’s now look at the content. In this first part of the story, I’ll take a look at the first couple of days of the conference and focus on what some of the biggest players in the B2C location space are up to. In the second part, next month, I will look at some of the applications and new players.

Inflow of serious money as B2C location goes mainstream

Austerity was kicked off the agenda at Where 2.0 this year, with investment in location moving well “north”! In part one of his report, **Andy Coote** focuses on what the players in the B2C location space are up to.

secured by Factual, a location data aggregator with customers including Newsweek and Facebook. My maths on the investments covered in presentations suggests that over \$200m of new investment has been secured over the last six months alone and the acquisitions in the same period have probably been worth double that. The scramble to invest in location seems to be based on the recognition (or hope!) that knowing about proximity, whether of consumers to businesses, or consumer to consumer, is going to be a significant contributor to driving next generation commerce.

This influx of money is particularly mind-blowing arriving in San Francisco from a stagnant economy with a focus on cuts and austerity. One of the biggest contrasts is in the attitude to investment. **Tyler Bell**, the product director

Ignite – “enlighten us, but make it quick” This is the curtain-raiser to the main conference, a series of five minute presentations on a wide variety of themes. **Raj Singh** from the Open Geospatial Consortium (OGC) did a good job of explaining one of the emerging problems of the B2C world, lots of APIs not much connectivity. He made a play for linked data as part of the solution whilst implicitly criticising OGC for failing to engage the “app hacker” community.

However, Ignite is really about the “off the wall” presentations. This year there was one outright winner for me, **Espen Systad**, the CEO of Norwegian social LBS, Origo. It’s impossible to sum up his presentation but one of his slides seems to show the struggle of journalists to find anything to write about in Norway and how location can help. Yes, the middle image (see picture, left) is a genuine underwear product you can buy through the website: Utube clip

<http://www.youtube.com/watch?v=q5XmDrUoisho>

Foursquare The main conference kicked off with **Dennis Crowley** in conversation with **Robert Scobel** on the “Future of Location”. Dennis, building his third successful business whilst still in his twenties, is the brains behind Foursquare, possibly the fastest growing location-based social networking business on the planet. Foursquare describe their proposition as “check-in, find your friends, unlock your city”. The idea of being “Mayor” of your local Starbucks was something I could never see catching on but they have grown from zero to



Espen Systad, Origo, was an outright winner at the conference. One of his slides (left) seems to show the struggle of Norwegian journalists to find a good story!

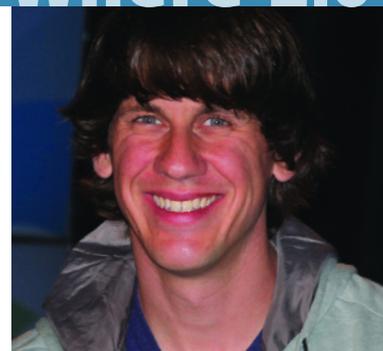
8.5m users worldwide and over 10,000 developers using their API in just over two years. These volumes have allowed them to develop symbiotic relationships with Facebook and Twitter, so for instance, if I check-in on Foursquare, my friends are alerted to my location on Facebook. They have also won straight commercial deals with blue chip retailers such as Gap and Vodaphone in the UK. Furthermore, Marks and Spencer recently ran a fundraiser to coincide with the London Marathon by which, for every check-in on Foursquare at a store, they donated £1 to the Breakthrough breast cancer charity.

He was the first of many to talk about serendipity – defined according to the Oxford English dictionary as “the phenomenon of finding valuable or agreeable things by accident”. One example of “serendipitous” functionality, now being developed in Foursquare, is being presented on arrival in a new city with advice on places to go and things to do, deduced from your behaviour in your home city. Dennis also sees potential in “future behaviour” – using the app to tell your friends “I’m going to be in Denver next weekend”. On the basis of the theory that, with so many users there must be something in it, I guess I’m going to have to try it out.

Ushahidi Another plenary presentation of note on the first day was **Peter Meier** who is involved with developing Ushahidi, the open source GIS platform, which now has a cloud hosted version called Crowdmap. Ushahidi is probably best known for its use in humanitarian relief in Haiti and more recently in Japan. These are obviously efforts to be unambiguously applauded. However, in the latter part of his presentation, he talked about its use for activism and in particular how they plan to incorporate a “danger compass” – developed to allow demonstrators in the London student riots avoid the police. To me, this risks alienating a large body of people who would otherwise be nothing but supportive.

Google Earth Builder The other major announcement in this session, by **Marissa Meyer**, was Google Earth builder, Google’s mapping platform in the cloud, part of their drive to “productise” their entire geo platform. This product will allow customers to upload their own vector data in standard formats like shape and MapInfo tab as well as raster data, including arranging “sidecar” files (of metadata). The management functions include storage (presumably in Google’s own proprietary non-relational structure), processing (including handling projections) and styling (symbolisation and dynamic rendering). The final element of the workflow is publishing where WMS will be supported as well as Earth and Map APIs. An interesting feature is that you can mash-up Google’s public content with organisational content. The product will be available in Q3 this year. Commercials were unsurprisingly not discussed but will obviously be priced to attempt a rapid “landgrab” from traditional GIS suppliers in their corporate and government heartland.

When you add this to **Jack Dangermond’s** comments in a later plenary about ESRI having “jumped in last year



in a major way to the cloud” it really looks like game on for control of the geo-cloud over the next year.

Facebook Places I never did figure the difference between keynotes and plenary presentations but **Justin Shaffer**, Places and Events product manager at Facebook, presented a keynote “Extending the Graph with Location and Time”. For the uninitiated “the Graph” in Facebook-speak is the core of the system, providing a uniform representation of, for example, people, photos, events and pages and the connections between them (e.g., friend relationships, shared content, and photo tags). Much of what they are doing around location borrows from others. What makes it interesting is how quickly than can build “capital” using their enormous user community. They believe check-in is less about where you are but more about who you are with – so it’s the intersection of people, place and time that is of most interest. However, they are offering merchants a platform for deals based on where Facebook users are currently located and are building up a geospatial database of socially-interesting places. Presumably this means they may never be interested in data for Scunthorpe. Their approach is proclaimed to crowd sourcing-led, however, it is interesting that, although not mentioned in their presentation, they are working with outfits like Factual (see later) who are very much about creating definitive data.

Bing Microsoft has big plans for location too. **Blaise Agueray Arcas**, one of the least pretentious and deeply thoughtful of all the presenters, talked about the Read/Write World. What they are developing is a hugely ambitious attempt to integrate together vector map tiles, nadir aerial imagery, birdseye (oblique aerial images), streetside (Bing’s street level imagery) backpack cams, user panoramas, flickr photos, indoor videos, 3D models, DSM/DTMs and 3D city (CAD) models on a global scale into a single database. Their vision also includes single renderers for all platforms based on HTML5 and CSS 3.0. Don’t bet against them pulling this off; their pockets are deep and they are desperate to close the gap on Google. They appear to see location as one niche in which they can achieve competitive advantage by technological leadership and emphasising quality, completeness and currency. Their increasingly close relationship with ESRI and Navteq may also be significant.

• *The second part of Andy Coote’s report follows in the next issue of GiSPro.*

Above: Where 2.0 heavyweights, Marissa Meyer, Google, and Dennis Crowley, Foursquare.

Images:

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... it really looks like game on for control of the geo-cloud over the next year.



future of PSI



Above: Professor Nigel Shadbolt spoke of exposing datasets to 'the glare of publicity'.

DID YOU THINK THAT the Public Data Corporation had been kicked into the long grass? Think again. **Francis Maude**, minister for the cabinet office minister is very up beat about the PDC and its potential to revolutionise the delivery of public sector information (PSI). Together with Professor **Nigel Shadbolt** of Southampton University, and a member of the Public Sector Transparency Board, he was speaking at a Locus Association meeting in London on 17th May on the 'Future of PSI in the UK'. Expect an announcement in July; the naming of the agencies to be included later in the summer and a public consultation until November.

This meeting was effectively an update on progress since Locus hosted Maude and Shadbolt in January 2010. Then the professor was an advisor to the previous government and the minister was in opposition. They both stressed the continuity of policy through the last 15 months and were proud of the progress made in opening up government data. Maude reiterated the Transparency Agenda under three headings:

there is no mention of the public data corporation in their business plan at all! However, George Osborne was quoted this week as saying that 'the UK will become a world leader in open data'.

Maude spoke of the 'years and years of regulation, custom and practice' that have built up around some public organisations, effectively preventing them from making their data available more freely. But in the same breath he spoke of the need for the information produced by these organisations to be maintained efficiently and at the highest standards. This conundrum is partly solved, according to Professor Shadbolt, by exposing datasets to 'the glare of publicity'. While we all understand how users are very good at picking up errors and inconsistencies, it is not in the nature of organisations, public or private, to voluntarily admit to their mistakes. Now for all surveyors and cartographers out there – how about this one: "speed always trumps accuracy". The Minister believes that this should always be the default position on release of data. This really will

OS plc or OS pdc? That may be the question!

Since 2010 and the opening up of public data, progress has been made. But many issues remain unanswered following the Government's announcement in January of the Public data Corporation. **Robin Waters** reports from a recent Locus meeting.

- **Accountability** – holding politicians and public bodies to account.
- **Efficiency** – delivering better value for money in public spending.
- **Exploitation** – enabling businesses and non-profit organisations to build innovative applications and websites using public data.

require a culture change! Or is that what surveyors and cartographers think of GIS anyway?

Challenges Competition, competition, competition is clearly the mantra. With Sir Bryan Carsberg, President of Locus, chairing the meeting it is not surprising that the privatisation of the telecoms industry – and other utilities - was held up as an exemplar. 'They said it couldn't be done.' 'Fixed line telephony is a natural monopoly.' Sir Bryan was the first director general of OfTel and clearly enjoyed opening up that industry. Government believes that if the data is published, the 'apps' will follow, although Professor Shadbolt did admit that it was more important to publish 'data that matters', not just any old data. The US experience has been that there was a rush to put out many datasets but that much of the apparent volume was caused by smaller units of identical data for different areas. Release of the COINS treasury data has certainly led to some really good visualisation tools – arguably much better than anything previously presented by government.

Shadbolt recognised some of the challenges still to be overcome in making PSI more accessible – infrastructure; quality (sometimes poor quality data is used as an excuse not to publish!); interpretation (especially experts fears of misinterpretation by non experts); data literacy; and security and privacy.

Investment and publicity Details are still vague but it seems that many publicly owned organisations – or at least their 'raw data' – are 'in the frame' and that a main reason for creating the PDC is to achieve some consistency in the licensing of PSI and attracting 'investment'. We still have little idea of whether the investment would be in a public private partnership (to provide infrastructure and services?) or as a straight privatisation.

Coincidentally (thanks to Steven Feldman's 'knowwhere' blog) the new business plans for government departments were published this week. That for the Cabinet Office has an objective to 'Support BIS and HMT to create a Public Data Corporation' and to 'Support the Shareholder Executive to drive the release of core reference data for free re-use from the Public Data Corporation'. The equivalent from the Dept for Business Information and Skills (BIS) is to: 'Work with Cabinet Office and HM Treasury to create a Public Data Corporation'. But the Treasury (HMT) has: Nothing –



... "speed always trumps accuracy". The Minister believes that this should always be the default position on release of data.



Although crowd sourcing – and public correction of datasets – is recognised as potentially very useful, there is a need to devise efficient mechanisms for collecting and quality assuring that data before using or publishing it. The Open Government Licence was seen as a step in the right direction but there are tailored versions that are not consistent and it is also recognised (and not just for spatial information) that ‘derived data’ is still a huge issue. Linked data was only mentioned in passing and as an aspiration. In conclusion, Nigel Shadbolt asked what Locus members could or would do with all the data that is being made available.

Answers There followed a lively Q & A session that was fairly predictable. Can public employees be persuaded to change their culture from paternalism to participatory? Answer – slowly!

Many users want UK-wide datasets – can the Minister overcome some of the effects of devolution? Answer – only by encouragement. Does the Minister understand that some types of information – such as addresses and transport timetables – are much more important as information for many different purposes than as non-core revenue earners for publicly owned businesses? Answer – yes, and we recognise that the new national address gazetteer is still ‘unfinished business’. Are we any closer to defining the ‘public

task’ of agencies? Answer – it is quite difficult in some cases, not least because the Treasury recognises some revenue streams as being very important.

Other questions concerned the selling of data assets to ‘behemoths’ which would preclude small and medium size businesses from innovating and the related issue of the rights to data that had been contracted out for collection. Audrey Mandela, chair of Locus, asked if the board of the PDC would include private sector representatives. Answer – don’t know! Finally, she also asked about derived data which was still a major issue for many users in both public and private sectors. Apparently Nigel Shadbolt is ‘in conversation’ about derived data with Sir Ian Magee, chair of the new Geographic Information Group which acts on behalf of all members of the Public Sector Mapping Agreement.

The meeting clearly showed that despite enormous progress with the opening up of public sector data in general there were still all of the same issues being raised as were the case several years ago. What will the PDC look like? Will privatisation (plc) be more attractive for some agencies than being swallowed by the pdc? Should the Locus Association members be careful of what they wish for? Answers, perhaps, by the end of the year but there is sure to be consultation and controversy before we get there!

The Locus Association encourages the public sector to maintain a fair and equitable trading environment for public sector information (PSI). The Government views PSI – developed by or for the public sector – as a key driver for stimulating economic growth and promoting social engagement, especially in times of austerity. It delivers significant benefits for the knowledge economy and sustains a small, but dynamic, private sector that supplies or re-uses that data, helping to grow the UK economy.

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Chris Holcroft is Director and CEO of the AGI.

THIS YEAR'S AGI annual conference – AGI GeoCommunity '11 – will be held in Nottingham on the 20 – 22 September 2011, at the well-appointed, centrally-located East Midlands Conference Centre. As AGI Director, it gives me great pleasure to update you on some of the progress made to date in preparation for this September's AGI GeoCommunity conference. Please read on and discover more about what is shaping into another great AGI annual event!

New venue Most, if not all of you, will know that we've moved the AGI GeoCommunity event to the purpose-built East Midlands Conference Centre. This offers a great 'integrated' conference and exhibition facility and improved space for our valued sponsors. For more details, please see: <http://www.agi.org.uk/conference-accommodation/>.

Sponsors to date We have frozen sponsorship prices this year and we are very pleased to have already secured support from the following companies:

- Esri UK (Platinum sponsor)

Programme The Call for Papers has ended and once again we have received double the quantity of submitted abstracts than we can accommodate in the programme. The Conference Committee will be meeting at the end of May to work through these submissions and a conference programme will be released in June.

Plenary speaker news Our first two plenary speakers to be announced are Sir **Ian Magee** CB, Chair of the newly formed PSMA Geographic Information Group, and **Emer Coleman**, Director of Digital Projects at the Greater London Authority.

Sir Ian is the first chair of this new high level group set up to oversee and provide advice to government on the public sector's requirements for Geographic Information in England & Wales, and how it should be sourced. He is a Senior Fellow of the Institute for Government; co-author of *Read Before Burning*, the Institute's report on arms-length bodies (July 2010); and of *System Error* the Institute's report on government IT (March 2011). Until 2005, Sir Ian

AGI GeoCommunity '11 a new venue, lower prices and new faces for the plenary sessions are helping shape the AGI's annual conference, says **Chris Holcroft**.

- Ordnance Survey (Platinum sponsor)
- Oracle (Ice breaker sponsor)
- Navteq (Ice breaker sponsor)
- Cadcorp (Silver sponsor)
- GGP Systems (Silver sponsor)
- Leica GeoSystems (Silver sponsor)
- Pitney Bowes Business Insight (Silver sponsor)
- UNIGIS (Silver sponsor)

Sponsorship support helps AGI keep the costs down for all delegates and is a vital part of the conference. Packages are still available; please contact AGI Event Manager Claire Huppertz (claire.huppertz@agi.org.uk).

Delegate prices are lower in 2011

The good news is that we have been able to make some savings moving to the new venue this year and we are passing these financial benefits on to AGI members. Attending AGI GeoCommunity is now better value than ever – an important consideration in these times of economic cut-backs!

Bookings to date Looking at the comparative number of delegate bookings made each year since 2007 to this point in time for each year, progress in 2011 can be seen to be very favourable with previous years. We look forward to this trend continuing. Bookings made now qualify for significant early bird savings.

was second permanent secretary at the Department for Constitutional Affairs and Head of Profession for Operational Delivery for the whole Civil Service.

Emer Coleman's work in the GLA includes leading on the London Datastore encouraging all public agencies in the capital to release their data into the public domain. Prior to moving to London in 2005 Emer worked in local government communications in Dublin having previously worked as a columnist and feature writer for a number of Irish newspapers including the *Irish Times*, *Irish Examiner* and *Sunday Times*. She is currently completing her Masters in Public Administration at Warwick Business School.

• For more see: www.agigeocommunity.com.

Member Type	Delegate Type	Early Bird	Standard
Member	Full Conference (Including Icebreaker)	£370	£470
Non Member	Full Conference (Including Icebreaker)	£525	£625
Speaker	Full Conference (Including Icebreaker)	£330	£330
Member	Full Conference (Excluding Icebreaker)	£255	£312
Non Member	Full Conference (Excluding Icebreaker)	£365	£439
Speaker	Full Conference (Excluding Icebreaker)	£200	£200
Member	1 Day Pass	£100	£135
Non Member	1 Day Pass	£150	£175
Student Member	1 Day Pass	£39	£50
Student Non Member	1 Day Pass	£59	£70



The AGI exists to "maximise the use of geographic information (GI) for the benefit of the citizen, good governance and commerce". Membership details are available from info@agi.org.uk or by calling: +44 (0)20 7036 0430

*There is more news of products and services on our website at www.pvpubs.com
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Database for road excavations

Intelligent Trench underground mapping software allows road excavation in the UK to be recorded, photographed and mapped on a national database. Developed for utilities, contractors and local authorities, it comprises: a Trimble Nomad GPS handheld with U-Track software; a 3M Dynatel Locator; 3M RFID (Radio Frequency Identification) markers with passive RFID tag technology; and a national database with web-based access. The companies 3M, Exor, Infotec and Trac-ID have joined forces to offer the mapping product with Korec as partner and UK supplier.

SIS goes fluent

With Cadcorp's SIS (spatial information system) 7.1 software, users can now generate hot-spot maps using kernel density estimation (KDE) techniques. Cartographic output quality has been enhanced through new label detection methods, the inclusion of de-cluttering algorithms and new text placement functionality. Maps can also be published in Microsoft XPS format. All the company's desktop GIS products are now based on the Microsoft Office Fluent user interface and all SIS products are available in 32-bit and 64-bit versions.

OnDemand upgraded

An updated version of Ordnance Survey's OnDemand web mapping service features additional products, served as raster images, including Strategi, Meridian 2, VectorMap Local, Land-Form PROFILE and MasterMap Integrated Transport Network Layer. Other features include: annual charge model increased from three to five bands; compliance with the INSPIRE directive; and overall service performance enhancements driven by an upgraded version of Geoserver.

BRIEFS

Territory Manager version 2.0, a tool for planning or modelling geographical territories from MapMechanics, introduces the option for users to take account of

drive times in the planning process, and adds various other features.

A hosted mapping service has been launched to deliver time and cost saving benefits to government organisations across England and Wales. The online DaaS (data as a service), viaEuropa for PSMA, from Europa Technologies will bring high-quality cartography direct to the desktop, web and mobile devices. The service extends the capabilities of viaEuropa services to include key datasets covered by the Public Sector Mapping Agreement (PSMA), including OS VectorMap Local and MasterMap Topography and Integrated Transport Network Layers. For more information, visit www.viaeuropa.uk.com/psma.

Europa Technologies has updated its range of global map products. The update includes map corrections and enhancements, plus product changes involving points of interest, political and administrative layers, road networks and gazetteer information. The 2011.1 release includes the Global Discovery, Global Insight Plus and Global 360 products.

GeoXploit Logistics, a geographical analysis package for the logistics market from MapMechanics, combines the GeoConcept geographic information system with a range of pre-configured mapping and geodemographic data. Features include: enhanced drive time calculation; editable AA road network mapping; and Service Allocator enables users to find the nearest and next nearest

Personalise your map!



Members of the public can create and customise their own maps for free at www.findfreemaps.co.uk. The Personalise Your Map portal produced by FIND Mapping, features a simple mapping toolset to customise and create maps with the ability to download the completed map as a PDF. Other features include: access to the Google API, OS Opendata and Openstreetmap on one website plus access to free UK government datasets.

location with given characteristics.

Avenza Systems has announced updated support for Esri ArcGIS 10 geodatabases and ArcMap document (MXD) files in MAPublisher 8.4.1 for Adobe Illustrator. This version of the mapmaking software can use its import tools to connect to personal, file and ArcSDE geodatabases as well as MXD files.

Since April 1, more than 100 government organisations have begun using a free online service from emapsite that supports the new PSMA. Contractor Link is a self-

service portal that enables government to better manage its contractors' access and use of licensed mapping. The contracting body authorises or denies access on a project-by-project basis, while emapsite provides an auditable, ongoing management record. Contractor Link enables authorities and government agencies to give their contractors fast, flexible and secure access to all data in the PSMA at no cost to the public purse. Instead, a nominal service charge is met by the contractor starting from £49 with a sliding scale of fees for larger areas of data.



Swinglet flies into action

Korec is now the UK and Irish distributor of Swiss company SenseFLY's unmanned flying camera, the swinglet CAM: a lightweight, unmanned air vehicle (UAV) with a high-resolution electronically integrated digital camera. Designed for small scale aerial mapping projects, it can be deployed in under a minute from a brief case, is hand launched and has a take-off weight of 500g. The camera records 10-40 cm/pixel images and can produce over 100 hectares of aerial photo coverage during its 30-minute flight. An integrated GPS-based miniature autopilot ensures that the camera starts, flies and lands silently on its own. Its flight path is defined in PC-based software and can be updated during the flight by using the drag-and-drop functions.

seminars | conferences | exhibitions | courses | events | workshops | symposiums

We welcome advance details of conferences, seminars, exhibitions and other events which are likely to be of interest to the GIS community. Please mention the name of the event, venue, date and point of contact for further information and send to Hayley Tear, *GISPro*, 2B North Road, Stevenage, Herts SG1 4AT Fax: +44 (0)1438 351989, e-mail: hayley@pvpubs.demon.co.uk

2011

Third Open Source GIS Conference (OSGIS) 2011
21-22 June, University of Nottingham, UK.

More information:
http://cgs.nottingham.ac.uk/~osgis11/os_home.html

INSPIRE Conference 2011
27 June – 1 July, Edinburgh, Scotland.

More information:
http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2011/

Esri International User Conference 2011
11-15 July, San Diego Convention Center, CA, USA.

More information:
www.esri.com/events/user-conference/index.html

11th International Conference on GeoComputation
20th – 22nd July, University College London, UK.

More information: <http://standard.cege.ucl.ac.uk/workshops/GeoComputation/index.html>

Society of Cartographers' 47th Annual Summer School (SoC2011)
5-7 September, University of Plymouth, UK.

More information: <http://soc2011.soc.org.uk/>

AGI GeoCommunity '11
– Placing Ourselves in the New Economy
20-22 September, East Midlands Conference Centre, Nottingham, UK.

More information: www.agi.org.uk/geocommunity/

Intergeo 2011
27-29 September, Nuremberg, Germany.

More information: www.intergeo.de

GDI APAC: Geospatial Defence & Intelligence Asia Pacific
27-30 September, Kuala Lumpur, Malaysia.

More information:
www.geospatialdefenceasia.com

SPAR Europe 2011
8-9 November, World Forum, The Hague, The Netherlands.

More information: www.spar-eu.com



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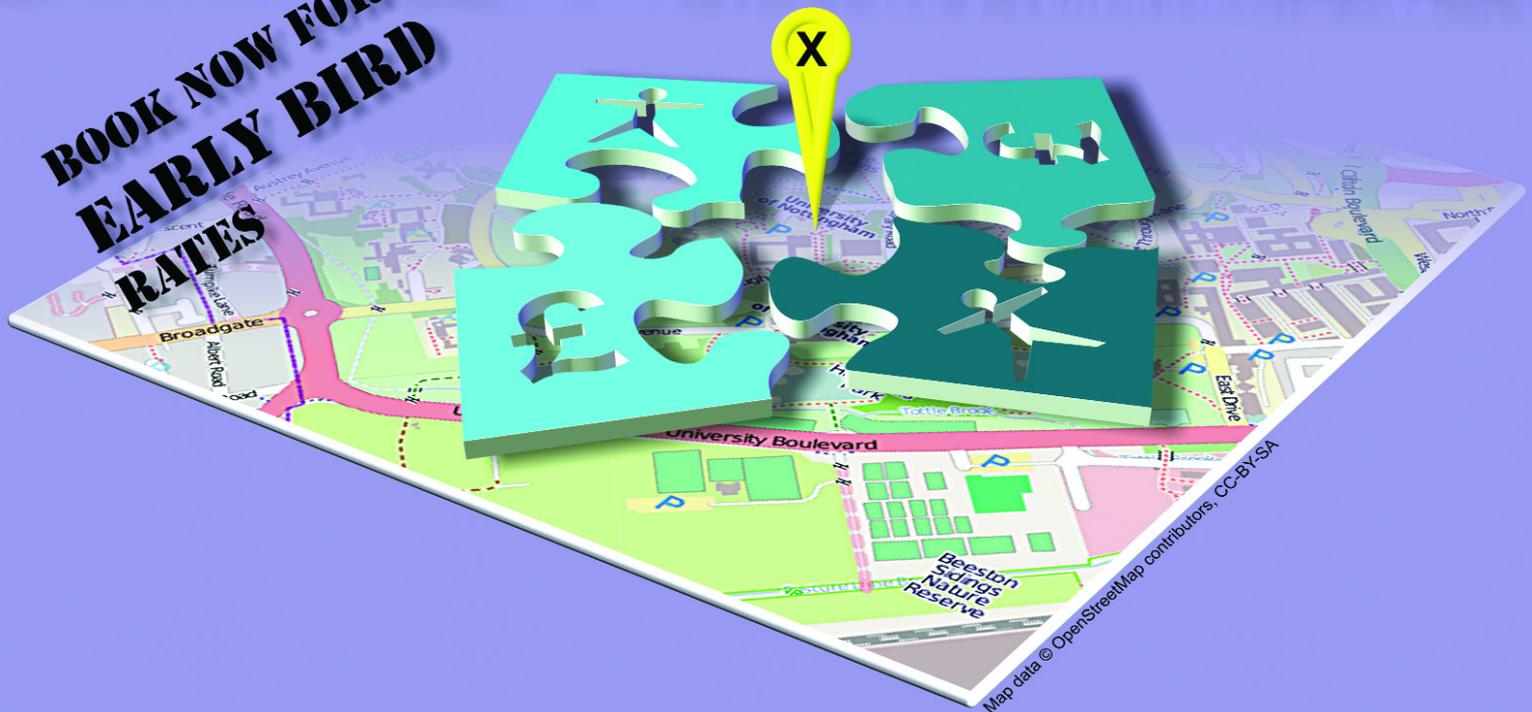


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