

Attendance up at Busy Bustling Show - GEO Business 2015



A busy two days found your reporters struggling to cover everything at the industry's annual show. A conference with two streams is always a challenge but we think that below we have covered the most relevant aspect for GIS professionals. We've published the session titles in full so you should be able to track them down.

With visitors queuing in droves to get in on the first day and attendance up 25%, the second GEO Business event attracted over 2,000 people from 47 countries. With an improved layout and over 180 companies represented the organisers were clearly delighted. Event director Caroline Hobden commented, "We have had so much positive feedback following the show and are thrilled to see such an increase in attendance in just a year since we launched the first show". Her comments are echoed by industry players:

"GEO Business is now the established show for everyone involved or interested in geospatial activities" and "The conference perfectly represented the energy of the geospatial industry... with inspiring presentations to reflect all the opportunities of a growing community."

The exhibition was certainly spectacular and the show floor was always bustling with activity. The absence of Esri can perhaps be explained by their own conference in the previous week. One seasoned commentator pointed out that conference attendees seemed lower than last year and several presentations were too oriented towards their presenters' companies.

The keynote on the opening day was an enthusiastic presentation on HS2, given by Kate Hall. Being an HS2 sceptic does not help your reporter relate to the content of Hall's talk. It was full of enthusiasm and justification for the scheme, including a rather bizarre diagram demonstrating that faster trains have greater capacity than slower trains. Not so Kate! Eight carriage trains leaving Euston at fifteen-minute intervals with the same number of stops have the same capacity, whatever their speed. If however, half the carriages are first class and empty, the capacity is dramatically reduced.

Geospatial Data Management and Big Data Techniques

Andy Wells from Sterling Geo believes we are still only starting to use remote sensing and that 'We ain't seen nothing yet!' His presentation, "Future developments in remote sensing – more than just a pretty picture" mentioned how higher resolution images, real-time video, and much higher frequency of standard optical or radar sensors will transform the market. Change detection will become much more effective and will be very important for local authorities, for example. But 'information from the internet' he argues, 'is like trying to drink from a fire hydrant'!

Wells believes that data will become a service rather than a discrete deliverable and so interpretation and labelling will become much more important. Users currently spend a lot of time 'not finding things'. That will change as searches become automated. He doesn't think that our industry understands what users want and we will be overtaken by those that do – or those who will just create a new 'need' – like Google Earth.

OS Overtaken by Open

On the subject of being overtaken, John Carpenter, director of strategy & planning for Ordnance Survey, was quite honest about having been overtaken by 'open'. His session, titled "Open data is more than just putting it out there!", heard him state that OS are now following the trend with collaborative data such as Open Rivers, Open Roads, Locate, Open Gazetteer. He thinks that the Environment Agency has led the way on open data and that future cities must be 'open'. However, he pointed out that more OS data was downloaded for the game Minecraft than for all other applications put together.

OS is now recruiting rather differently than in the past, and doing its best to embrace cultural change. They have had talks with OpenStreetMap – which can use all of OS's open data – and they are now taking steps to get users of all their open products to voluntarily register so that they can find out how data is being used and why. A final question about Linked Data elicited the response that there was not much demand yet! How did they really know?

Case for a UK Cadastre

Julia Stolle from Technics did her best to make a case for a UK cadastre, perhaps starting with new developments but did not, in my view, manage to join all the dots ("Boundary Demarcation in the UK and Europe. Is there a case for a UK cadastre?").

It is all very well pointing out the obvious flaws in our property registration system; it is quite another to put a business case for changing to a continental system. And she admitted that many of the boundary disputes are not about the geometry but about people unable to get on

with their neighbours. She did, however, make a good case for only allowing full registration with 'as built' surveys and believes that although developers now have to produce as-built plans, conveyancers don't have to use them and with many sales now made 'off plan' this could become a growing problem. Someone pointed out that there are only 27 'fixed' boundaries in all of England and Wales. No vote was taken but, even in an audience with many surveyors, I doubt the motion would have been carried!

Up in the Air

In "Small Unmanned Aircraft (SUA) data capture operations in congested areas" Peter McConnell, of Skycap, reviewed the regulatory requirements – or lack of them. There are now 600+ Permissions for Aerial Work (PAW) authorised by the Civil Aviation Authority for individuals (not companies). CAA has been overwhelmed by the demand and does not even have dedicated staff. Practical issues include the novelty factor which means that the use of SUAs can attract many spectators. It was suggested that the fees for PAWs should increase several-fold to pay for the necessary staff. McConnell thought that we are in a 'wild west' phase with very cheap drones operating as little more than 'toys' and the distinction between these and the professional versions, is not well enough defined. He thinks that there will probably be some sort of incident that will challenge the safety and/or security aspects of SUA use before any legislation is brought in.

Smart GIS

In an otherwise rather disappointing series of sessions, Adam Iwaniak, from the Wroclaw Institute for Spatial Information and Artificial Intelligence, spoke on "Geo Media semantics toolkit for linked geospatial data". He articulated the main reason for the slow take-up of linked geospatial data – the rather simplistic assumption that we can all agree on what we mean when we talk about Wroclaw, Islington, or the High Street. Yet just look at how difficult it is to get agreement on the new roads database being prepared by Ordnance Survey and GeoPlace with the aid of the Dept of Transport. Highway engineers, utility asset managers, satnav suppliers and the Royal Mail can all mean completely different things when they refer to Long Lane in Little Snoring! And why shouldn't they? Personally, I am not even convinced that each world view can necessarily be constructed from a set of atomistic building blocks which are themselves never used by anyone except the IT experts behind the scenes.

Emerging and Developing Technologies

In "The evolution of geospatial technology – from data to knowledge" Trimble's Lee Braybrooke articulated the company's message that the 'value chain' for capturing and delivering geospatial data needs to be extended by geospatial professionals into interpretation, analysis and visualisation. The data must be turned into knowledge brokered by people and software that understand the inputs but also understand the end user's requirements for outputs.

Meanwhile, Gary Gale posed the question, "What does the future of maps look like?" Gary, in his usual quirky style, set out ten predictions for the future of maps – having defined maps as already being nearly always digital or derived from digital information. His predictions were mostly supported by other presentations and/or the exhibition and taken together they auger well for anyone pursuing a career with geospatial information. They will move towards being in real time; they should be able to move from inside to outside and vice versa – seamlessly - and will become 'less closed and more open'. Accuracy should improve with the ever decreasing cost of GPS (at least to the end user) and the potential of so-called (QPS) Quantum Positioning Systems – very accurate inertial systems – now just being trialled in submarines where current inertial systems quickly drift off position.

Sharing of locations – whether we like it or not. The classic case is the anonymised (so we are told) use of mobile phone positions to 'crowdsource' traffic flows – of vehicles or pedestrians. However, the personalised delivery of maps, which is already with us, will increase. This will not necessarily be controllable. We are familiar with our web experience being different from our friends – based on our individual browsing habits and any other information that various layers of the supply chain know about us. We are familiar with maps popping up already centred on our current location. Personally, I am very annoyed that some sites – e.g. my local planning authority – cannot remember where I am for a map but does send me location-based 'alerts'. In contrast, my county council always remembers where I was looking at last time I logged in and goes straight there.

Gary pointed out that the delivery of maps by Google, for example, in disputed areas of the world is already personalised based on the provider's assumptions about your location. Different views of the border between India and China will appear if you are assumed to be Chinese, Indian or 'other' – presumably based on your perceived IP address. The same applies to the 'border' between Crimea and (the rest of?) Ukraine.

There will be a proliferation of stylised 'maps' able to show, very effectively, spatially variable datasets in a variety of different ways to illustrate very diverse continuous or discrete datasets. Maps will continue to be printed – on a variety of media – and will have to accept that 'white spaces' are not really acceptable. Gayle's examples of the crowded slums in various large cities being ignored because they don't have navigable roads is now unacceptable for administrators and can be 'filled in' by imagery or 'volunteered' geospatial information. Finally, he emphasises the simple fact that any visible map is only ever the tip of the huge data iceberg which forms its foundations. We are still only scratching the surface of this iceberg and drilling deeper will present us not only with more information but with different ways of presenting it.

Wear Your GIS with Pride

Nutiteq's Jaak Laineste delved into the world of wearable GIS tools – from huge helmets to rather heavy spectacles and single eye displays. However, the most interesting part of his presentation was on the improvements of indoor positioning highlighted at Microsoft's Indoor Localization Competition in April this year in Seattle. The winner was the EU's Joint Research Centre team (remember INSPIRE?) with an infrastructure free experimental STeAM system – Sensor Tracking and Mapping. It will not win a fashion prize but was shown to be better than any of the competing systems using local transmitters with an accuracy of 0.2m during the trial. By comparison, the majority of the 23 competitors were worse than 1m but only five were actually from industry as distinct from research institutions.

International Issues

Matt Pennell's description of MapAction's work in Nepal was fascinating. In "Taking the web out of web-mapping: a different approach in a disaster" he emphasised the difficulties of operating in 'disaster' environments with non-existent or intermittent power and communication channels. He also made the point that they were at their most useful when compiling simple maps to help coordinate the aid effort in an emergency – they have to use any information available and turn it into easily understood maps on paper (the supply of which may be limited) or on local networks. They now promote their 'kiosks' in the field which service their clients on a local network and enable their own staff to concentrate on collating and presenting the relevant data.

Airborne optical remote sensing can be used under the Comprehensive Nuclear-Test-Ban Treaty (CTBT) during an On-Site Inspection (OSI) searching for evidence of an underground nuclear explosion. In "Using airborne remote sensing to search for illicit nuclear explosions" Dr James Palmer from AWE described the development and testing of an instrument suite to be deployed in helicopters if required. The treaty has not yet come into force but would impose many constraints (e.g. maximum flying height of 1500m). The sensors include a hyperspectral imager; thermal camera; RGB/CIR camera; LiDAR; and HD video. These have all been tested during a recent large field exercise in Jordan.

750 Million Need It

Fred Mills ("Encouraging mass BIM adoption: the role of Scan-to-BIM") talked up BIM for the masses! He said that over 750 million people need to be using BIM worldwide if its potential is to be realised. That represents a huge market for his 'theB1Mmail' (sic) promoted as the world's first BIM newspaper. His illustrations of the progress being made by scanning technology and BIM software were impressive. Apparently, Finland is the most advanced country in Europe for BIM take up followed by the UK – which has government mandated targets. Elsewhere he claimed that Australia is way ahead with South Korea and Brazil catching up fast. Even Antarctica has one research station using BIM and proving that it is ubiquitous and useful everywhere.

Standards, Risks and Communication

In sessions aimed more at surveyors, James Kavanagh introduced the RICS's the IPMS, the International property measurement standards, which defines exactly what areas are to be included so that land and buildings can be valued in exactly the same way worldwide. He also emphasised that measurement standards are vital for the delivery of BIM while acknowledging that a BIM model of RICS's London headquarters was too large for any computer they owned to handle!

Meanwhile, Chris Preston, chair of the RICS Geomatics faculty who works for Network Rail asked his audience if they like taking risks before pointing out that we all take risks with our professional work but must always take steps to minimise and mitigate them. Cheap surveys can lead to costly litigation and great damage to a practitioner's reputation. He agreed with a questioner that many users simply don't understand geospatial data. He suggested that if we are to get better and become more efficient there must be a 'wash up' at the end of every project to learn lessons and promulgate them through the organisation – or through professional bodies. We have to get better at communicating including to our clients.

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