

2000+ Attendance Firmly Establishes Show - GEO Business 2015



GW's reporting team (Richard Groom, Robin Waters, Nick Day and Stephen Booth) offer readers their impressions of what has quickly become the industry's No 1 annual event.

With visitors queuing to get in on the first day and visitor attendance up 25%, the second GEO Business show attracted over 2000 people from 47 countries. An improved layout with over 180 companies represented and 140 workshops 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.

Derry Long of MBS Survey Software commented, "GEO Business is now the established show for everyone involved or interested in geospatial activities. Once again GEO Business delivered a top quality exhibition and conference that showcases the best that the geospatial community has to offer. Meanwhile, conference chairman Graham Mills reported a conference that was bustling with delegates, explaining, "The conference perfectly represented the energy of the geospatial industry at the moment, with inspiring presentations to reflect all the opportunities of a growing community."

The inaugural event last year was an outstanding success, reports Richard Groom. But outstanding successes breed heightened expectations, so resting on laurels is not an option. This year's show attracted more exhibitors from more countries, more registrations, more workshops and more papers submitted for presentation at the conference. On the face of it, expectations should have been satisfied and in general they were. The exhibition was certainly spectacular and the show floor was always bustling with activity.

The keynote on the opening day was an enthusiastic presentation on HS2, given by Kate Hall. Being an HS2 sceptic does not however 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. HS2 will be good news for surveyors and to satisfy the project's need for trained workers there is (or will be) an 'Academy for High Speed'. Let's hope that the RICS and CICES are involved in ensuring that the workers will be trained to survey to a satisfactory standard.

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!' 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 is like trying to drink from a fire hydrant!' Data will become a service rather than discrete deliverables while interpretation and labelling will become much more important. Users currently spend a lot of time 'not finding things' – which will be automated. Andy doesn't think that our industry understands what users want and we will be overtaken by those that do – or just create a new 'need' – like Google Earth.

GIS or BIM?

BIM featured extensively in the programme which included two impressive talks from Arup engineers. Paul Hill spoke about the redevelopment of Croydon and Yung Loo talked about route selection for CERN's 100km Future Circular Collider. The two talks were remarkably similar – and equally engaging. Arup has collated spatial data about the sites, data about the structures to be constructed, and data about funding and planning, and put it together into software tools for each project. The tools are both interactive and used to plan and manage the work.

In the case of Croydon, the particular value is in coordinating the activities of a number of separate projects that will combine to transform the centre of the borough. The projects depend upon each other for the success of the overall vision and being able to demonstrate coordination helps to give stakeholders the faith to proceed enthusiastically and with greater confidence that they will benefit from the added value of the whole scheme. The tool bridges the gap between engineering, planning and finance. CERN is a collaboration between twenty-one nations, so the need for a single point of truth is just as vital, although the tool has a greater engineering focus.

Are these tools BIM or GIS? Now there's a question. They are highly collaborative and both tools are intended for the full lifecycles of the

projects – so the answer must be ‘yes’. But then optimisation of design is a CAD function, and analysis of attributed spatial data is GIS. As if to add to the possible confusion, Paul Hill also mentioned AIM (Asset Information Management) and BEM (Built Environment Modelling). These tools highlight the limitations behind our human need to classify everything with restrictive names. Surely the only way to make sense of this is to treat BIM, CAD etc as applications that use spatial data, and yet many BIM people seem to think non-spatially. No wonder there is confusion!

Measurement and Boundary Opportunities

RICS Land Group Director, James Kavanagh’s presentation on International Standards and Measurement Specifications for various types of surveys was quite the best paper Nick Day attended. “Clear, concise, and with loads of important points that needed airing”, was Nick’s verdict, adding “many I’d been banging on about over the years in Overcurrents”.

Andrew Thompson, from Savills, suggested that surveyors involved with boundary disputes should be able to make themselves a little richer. Although not suitable for a first job, neighbour disputes can often be solved by surveyors with a breadth of knowledge and experience. Very often this is at the expense of lawyers who just don’t understand the spatial issues. Examples include ‘right to light’ and ‘party wall’ problems, not to mention the issues surrounding the digging of new cellars in many expensive London streets!

Many people, including lawyers simply don’t understand that red lines for planning and red lines on Land Registry plans are not necessarily in the same place or even meant to be so. But lawyers views often seem to be accepted without question and we undersell ourselves. Always define the scope of work and terms of business, and do learn sufficient ‘case law’ for the job in hand, was Thomson’s advice.

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. 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 make a good case for only allowing full registration with ‘as-built’ surveys and believes that although developers now have to produce as-built surveys for registration, conveyancers don’t have to use them and with many sales now ‘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!

Keeping ZEB Interested

Point clouds were another recurring theme. Morten Hertz Knudsen is specialist and market manager for surveyors COWI. Laser scanning is his world and he gave an interesting talk about using ‘COWI SLAM’, involving handheld hardware remarkably similar to the ZEB1 handheld scanner to survey the inside of a multi-storey building, supplemented with photogrammetric point cloud data from a UAV platform for the roof and ‘COWI Kinect’ to survey detail in the ceiling voids. All very interesting, but the most valuable information came in response to a question from the audience. You have to be methodical when using the ZEB1, Knudsen said. He observed the stairwells and the floors as separate scan sessions and stressed the need to plan the route carefully. To survey long boring corridors, he adds detail (cardboard boxes) to the scene, to make the survey sufficiently interesting for ZEB to operate properly.

Maarten Bassier described research being carried out at KU Leuven on laser scanning using only cloud-to-cloud registration. The argument is that using targets within the scan for control is expensive and technically difficult, meaning that the surveyors need a higher level of expertise. Remove these from the equation and anyone can scan. The research is intended to result in guidance on what techniques will give acceptable results. Bassier has conducted his research on a mid-scale building (70m × 40m and 4m high) and a larger building (an airport pier). His conclusion is that it is possible to survey the mid-scale building within ‘LOA 30’ – a term not familiar in the UK. For the larger building he advocates controlling the scans using GNSS – even though an airport pier is hardly an ideal environment for GNSS and likely to be less accurate than the errors in the scanning.

Detecting What’s in the Point Cloud

The holy grail for laser scanning is automatic identification and modelling of features in the point cloud. Jana Siebenbrodt from Faro 3D Software (formerly Kubit) gave a useful talk on the need for 3rd party software to beef-up REVIT for surveying purposes. This was a subject also covered by Kevin Williams from ClearEdge. It’s a fast-moving area and clearly critical to productivity. Modelling of flat surfaces and cylindrical, rhomboid and i-beam shaped objects seems to be well advanced. Indeed, it is even possible, in situations where there is a regular pattern of objects in the point cloud, for software to use the pattern to detect objects where the point cloud is relatively sparse. Siebenbrodt’s opinion is that the modelling process will always involve some user input and that generalisation of detail for modelling is the challenge. Do you want to include every steelwork bolt in the BIM? Williams suggested that modelled intelligence could be pushed back into the point cloud after modelling, so that points used to model features would be feature-coded.

There were two talks on identification of feature material in the point cloud. Kyle Schertzing from Schertzing Studio has an architectural background and has been able to detect distinctive microtopography on the surface of materials (plywood and concrete), which he believes could aid automatic identification. Hywel Evans from the University of Nottingham has been investigating the use of multi-spectral scanning to determine the spectral signatures of materials, in a process similar to classification of remote sensing imagery.

Three-word Addressing

For anyone wanting to deliver mail in a Brazilian favela, What3words is the answer, as related by Chris Sheldrick. Every 3m square tile on the planet is identified by three words, which we were told are easier to remember than three lines of conventional address. The link

between the words and the place is realised through an app and the significance of Brazilian favelas, is that they have no street names. They also have a version of What3words in Portuguese.

The session was rounded off by Kevin Cressy from Arup, who urged geo people (in general) to realise that their backgrounds are suited to central roles in organisations, because 'geospatial' is, or should be, at the centre. He introduced delegates to The Zachman Framework as a means of plotting where individuals are and how they can move to the centre. The framework is an ontology and fundamental structure for systems architecture which provides a formal and structured way of viewing and defining an enterprise (for more on this topic, see Wikipedia).

Risk Assessment and Cable Pits

Louise Irvine from Black and Veatch spoke on the use of GIS to prioritise inspection of cable pits in London. The driver is health and safety, so she approached the problem from a risk assessment point of view, by incorporating the likelihood of failure – based upon the history of previous failures, with the consequences of failure – based, for example, upon the number of people who could be in the area and at risk. Having created the cable pit database, the challenge is to maintain and improve it. To do this, observations from the inspections are recorded so as to refine the risk assessment and justify the cable pit maintenance regime.

Deformation monitoring barely featured in the conference but a paper presented by Francesco Boscagli from IDS, Italy put that partially right by describing a technique for monitoring displacement and vibration using radar via a case study survey of bridges on a freight railway in Western Australia.

Emerging and Developing Technologies

Jaak Laineste, from Estonia, and founder of @Nutiteq, gave a topical paper on Geo & Wearables 2015. For any of you thinking about buying an Apple iWatch, I wouldn't bother, says Nick Day. I don't consider myself a Luddite by any stretch of the imagination, but when they were announced, to the usual Apple fanfare hype, I was sceptical of their value. At one point, Jaak asked the room of about 150 techies how many owned an Apple iWatch. Not one hand went up, perhaps validating my scepticism. He then mentioned that, just a week previously, Apple had considerably downgraded their sales' projections. Sometimes, some new technology just doesn't make sense.

There were undoubtedly highlights in the conference but perhaps last year's was better. Delegate numbers seemed lower, which is worrying, given that this is one of the few opportunities to accumulate CPD hours. It is also arguable that there were several presentations that used the conference as a platform from which to sell. Surely that is what the commercial workshops are for! The cost of attending is not insignificant, with early bird rates of £99 for one day and £159 for two days. Delegates are paying for quality and for independence and it is questionable whether the value quite reflected the price. The conference proceedings are available from www.geobusinessshow.com

This article was published in Geomatics World July/August 2015

<https://www.gim-international.com/content/article/2000-attendance-firmly-establishes-show-geo-business-2015>
