Intergeo, Students and the Geoinformation Chain

Intergeo 2013 – held 8-10 October in Essen, Germany – attracted over 500 exhibitors and 16,000 visitors. The sizes of the booths from China were notable, as were their number. The Chinese mainly focus on levels, total stations, GNSS receivers and mobile GIS software, but more recent developments such as laser scanners are increasingly joining these. Many visitors looked skywards, since there were multicopters in the air everywhere, both outdoors and in. Flight demos were given by over 30 UAS firms – a tenfold increase on a few years back, when many sniggered at these 'toys for boys'. Today, however, UAS have evolved into high-potential surveying devices. Outdoors Ascending Technologies allowed bystanders to remotely pilot its octocopter, designed in a cut V shape. Stability is ensured by software allowing rapid feedback from sensors to rotors. This was the first time I had attended Intergeo since resigning as editor in chief of this magazine in 2008. This year, my main aim was to guide my students from the Delft University of Technology, The Netherlands, around the exhibition. Having all gained a BSc in a geomatics-related field, either from The Netherlands or from as far afield as Lithuania, Greece and China, these students started in September 2013. Thanks to courses on geodata acquisition and the principles of GIS and having studied my book *Geo-information: technologies, applications and the environment* (Springer, 2011), they were sufficiently equipped to absorb the technology. Klaus Neumann (Leica), Donald Carswell (president of Optech), Christoph Strecha (CEO and founder of Pix4D) and others explained the nitty gritty of digital cameras, airborne Lidar, photogrammetric and point cloud software and more. Delft's 2012 redesign to create the MSc in Geomatics for the Built Environment preserved the entire geoinformation chain. The starting point is that geoinfo is needed to support proper management of the Earth and good governance. In order to do so, geodata must first be acquired and subsequently stored in DBMS after georeferencing and other pre-processing. The data is then ready for analysis which includes merging a diversity of datasets, performing GIS operations and loading data in hydrological or other specialised computer models. At the end of the chain, the results – tables, maps, 3D models, animations, etc. – are sent over the web to serve planners, constructors and others. Data without indicating quality is no data, so its assessment and control are key. Boards of educational institutions are often impressed by glossy 3D city models or flood animations and may overlook the fact that the results entirely depend on high-quality geo datasets. They are crucial, as are the piles of concrete for upholding buildings and bridges, but they are hidden from view and hence are not sexy. These early stages in the chain might become seriously endangered when university boards confuse invisibility with irrelevance. Intergeo was a great chance to catch the entire chain in a nutshell, and to be reassured of the value of every link within it.