

GEOSPATIAL CONVERGENCE: THE NEXT STEP

Map Middle East 2007

Map Middle East 2007, the third Annual Conference and Exhibition on Geospatial technologies and their applications, was held from 9th to 11th April 2007 at the Dubai International Convention and Exhibition Centre, Dubai, United Arab Emirates (UAE). Started in 2005 as a regional initiative for the Middle East region, this year's theme was Geospatial Convergence: The Next Step.

During the Plenary Session on Geospatial Convergence, Marc Tremblay, general manager of the Commercial Business Unit at DigitalGlobe, told conference that geospatial data had gone mainstream; over 100 million downloads daily now take place over Google Earth. What is more, firms were discovering new markets by converging existing geo-information into new services for the general public, bringing together the information in a user-friendly and usable format. He predicted the increased use of geo-information converging into a common business language based on geo-information. Peter Becker, managing director of ESRI Global UAE, approached the convergence issue from the location perspective. He also recognised the substantial growth in users of digital geo-information, remarking that location had become the common attribute of all objects. But to be useful to a wide audience visualisation and spatial context were, he said, essential. Ashutosh Pande, managing director at Sirf Technology, took a granularity approach to convergence. As with instruments that measured time, those used to measure location had become part of other instruments and often people did not even see the time or location aspect in the device they were using. According to this speaker, a presently unimaginable number of applications lay ahead of us when we succeeded in giving location the same high level of granularity as we had managed to give time. His central premise was that location was not the application but the (killer) enabler; it may enable location-enabled games, location-aware notebooks and, more generally, the use of devices that know where they are.

Leadership Forum

We are living at a moment in history witnessing rapid change both in the demography of the world and the impact upon society of technology. Change brings uncertainty and, when unpredictable, also fear. Where there is uncertainty and fear there is also desire for leadership. How to encourage and assist young up and coming GI managers from various sectors of government and industry in taking on new challenges and achieving higher goals? This was the central quest of the Executive Geospatial Leadership Forum. The forum was kicked off by Vanessa Lawrence, director general, Ordnance Survey (OS), UK, who has received honorary doctorates no longer to be counted on the fingers of one hand for her groundbreaking policy of change. She is visiting professor at two universities in the UK, recipient of multiple awards, and UK government advisor on geo-information issues. In her inspiring presentation entitled 'Changing Perspective of National Mapping Organisations – Public-Private Partnership' she showed how Ordnance Survey was bringing geo-information to the millions by making full and anticipatory use of web-technology, keeping sharply in view the geo-information needs in the public sector, including schools, and private sector, including individuals. An example is the design-your-own-map initiative, as a major result of which OS Master Map has become a success story as an organisation and a paradigm for many other National Mapping Organisations. We never know where technology may take us, according to Ms Lawrence, and therefore fifty researchers at OS, around 3% of the employees, are exploring new opportunities. She described how in her experience there was a lack of understanding at management level in many organisations as to what geo-information was and the opportunities it offered. Less than 50% of OS revenues were obtained from the public sector, the other half was collected from the private sector. The importance of good geo-information became clear when one considered the annual average of four million road excavations. Derek Clarke, director of surveys, South Africa, raised the question, "What are the reasons for the lack of successful SDI implementations?" and he gave himself the answer, "Lack of leadership." He concluded that SDI should be positioned at the same level as other infrastructures.

Technical Sessions

Presentations in the track on GPS, Mobile Mapping and LBS illustrated how the combination of satellite positioning technology, mobile phones and GIS offered many opportunities for helping find a certain location; pharmacy services was an example in a presentation from India. The same technology also enabled analysis of human and animal movement. Jostein Sagele of Telemark University College demonstrated how GPS-tracking combined with land-use maps and digital elevation models could be used to carry out habitat analysis on red deer. Sherif Akoush from the American University in Cairo presented an interesting paper on predicting the future locations of people given their past movements, using Bayesian learning implemented in artificial neural networks.

Seminars

Two seminar sessions were held: one on construction and engineering, with papers including one from by Kilian Ulm, CyberCity, Zurich Switzerland, on generating a highly accurate 3D-model of the Zurich airport buildings and its surroundings. Another paper included in the Proceedings addresses GIS and airport obstacle mapping. The second seminar was on critical infrastructure protection and emergency management. A round-table discussion also took place during conference on Spatial Data Infrastructure (SDI). Unfortunately, the keynote speaker Brig. Dr. Sivar Kumar Head, NRDMS & NSDI, Department of Science & Technology of the Government of India, was unable to appear; however, his work and opinions are presented in this month's interview (GIM International, June 2007).

ISPRS Conference

Under the umbrella of Map Middle East, a conference on Remote Sensing and Photogrammetry was hosted by ISPRS, offering interesting state-of-the-art presentations from John Trinder, Orhan Altan, Ian Dowman, Monika Sester and Naser El-Sheimy. Heinz Ruther presented his work on heritage documentation using terrestrial Lidar technology, among other techniques. He referred in his presentation to ongoing discussions in the pages of GIM International regarding the possibilities and shortcomings of terrestrial Lidar technology. Warwick Hadley of Optech Inc., Canada discussed the advantages of multipulse Lidar technology without, however, explaining the principles made use of in this technology.

Exhibition

The exhibition floor was surprisingly large given that this was a regional event, and it was, especially on the first day, well visited. The main GIS software developers, including ESRI, Bentley Systems, MapInfo, and the Middle East branch of Intergraph were present. Many vendors of data-acquisition technology demonstrated their equipment, including the Gulf branch of Sokkia, Topcon, Trimble and Vexcel Imaging. Digital map-data providers Teleatlas and Navteq were also here, as were remotely sensed-data providers GeoEye, DigitalGlobe and Infoterra. The latter holds exclusive commercial exploitation rights for the German radar satellite TerraSAR-X, the satellite operating in the X band (wavelength around 3cm) and potentially scheduled to be put into orbit by late May 2007 to circle at an altitude of 514km. Smaller companies were here too, including Definiens, whose products are built on its eCognition platform technology. Other smaller firms in the hall were Terrasolid of Finland, which provides software for processing Lidar data and aerial images, OmniStar, a member of the Fugro Group, provider of satellite positioning services, Cyber-City from Switzerland, Inpho GmbH, a German company taken over by Trimble on 14th February 2007. Also at the exhibition was Cyclomedia of the Netherlands, the CEO of which recently declared with conviction (GIM International, February 2007) that "for the time being we do not plan to carry out projects in Asia and the Southern Hemisphere". The appearance of this company at Map Middle East thus proves that change in the geomatics discipline is indeed progressing at the speed of light. Pictometry Middle East, based in Dubai and licensed to operate the patented Pictometry technology, (see Interview, GIM April). Many of these firms see the Middle East as a rapidly emerging market offering above average opportunities, and who does not want to be part of possible success? The exhibition floor was not overcrowded; however, in this part of the world an exhibition is not only used to reinforce and expand one's network but also for doing business.

Concluding Remarks

This was the third Map Middle East, jointly organised by GIS Development (India) and Dubai Municipality (UAE). It is well organised and much effort is put into attracting interesting keynote speakers. New trends in technology may be sampled on the exhibition floor. But a generally positive response to the event does not mean that there is no room for improvement for this young addition to the geomatics-events calendar. One main hindrance is the multitude of options to choose from. With two plenary sessions, two leadership forums, an educational forum, two seminars, a workshop on Standards and Interoperability, a round-table meeting, eight technical sessions, a poster session and an additional ISPRS conference, the event is somewhat over-ambitious. This results in an incoherent programme. Perhaps GIS Development, the main organiser of the event, should reconsider the spectrum and foci of attention. A more workable formula might be: (1) a few keynote speakers presenting lectures of around an hour's duration on state-of-the art technology, (2) regional researchers presenting their work in a limited number of technical sessions, (3) students and others showcasing work during a poster session limited in time, during which no other sessions are planned and in which one is able to communicate personally with the authors, and (4) companies presenting their services and products during company sessions. In conclusion, I should like to congratulate the organisers on the success of the event.