ASPRS ANNUAL CONFERENCE

Geospatial Goes Global

This yearâ€™s annual conference of the American Society for Photogrammetry and Remote Sensing (ASPRS) took place from 7th to 11th March, with the theme â€˜Geospatial Goes Global: From Your Neighbourhood to the Whole Planetâ€™. Aimed at a wide variety of professionals, the conference included more than four hundred technical and special session presentations and at least seventy poster sessions.

Chip Groat, director of the US Geological Survey (USGS), gave the opening keynote address. He discussed the Earth Summit process that is creating agreements amongst space-faring nations of the world to more effectively integrate their Earth observation programmes and exchange the resulting Earth observation data. Several key speakers addressed plenary sessions of the conference: Santiago Borrero, secretary-general of the Pan American Institute of Geography and History, Karen Schuckman, new president of ASPRS and director of geospatial applications for EarthData Solutions, ESRI president Jack Dangermond and Bertram Beaulieu, director of the Office of Americas in the Analysis and Production Directorate of the US National Geospatial-Intelligence Agency (NGA).

Busy Stands

This year 77 exhibitors took part, more than ever before. As could be expected given the location of the show, a short drive from Washington D.C., many vendors with stands in the exhibition hall were catering for national security needs and agencies. While several exhibitors commented that the hall was a bit small for the number of stands, they unanimously agreed that traffic was excellent. Perhaps a contributing factor was the cold and blustery weather outside, which discouraged participants from exploring the neighbourhood between technical sessions. There was also widespread agreement that the overlap between this show and the meeting of the Geographic Information & Technology Association (GITA) in Denver made no sense.

Third Dimension

Regardless of the official theme of the conference, two topics jumped out at me in the exhibit hall: 3D visualisation and imagery. The accelerating transition from 2D to 3D-visualisation, which began about five years ago, was evident as I walked around the exhibition floor. (For a primer on 3D GIS see 3D GIS: A Technology Whose Time Has Come, by Gary Smith and Joshua Friedman, in the November 2004 issue of Earth Observation Magazine.) This development is driven in part by the increasing demand for spatial visualisation to assist with homeland defence. As the audience for maps expands rapidly, addition of the third dimension makes them more accessible. In particular, adding true texture to buildings and terrain gives people who are not used to working with maps a better sense of scale and the relationship between features.

Film vs. Digital

As for imagery, I was able to identify two big issues: film vs. Digital, and the scarcity of commercially available satellite imagery. Digital aerial sensors, which first made a big splash a couple of years ago, are now rapidly replacing film, and some conference participants were wearing 'Film is dead' badges. Nevertheless, many people are still trying to figure out the new digital technology and many companies are loath to give up their large investment in film-based processes and equipment. Many in the business are still trying to decide whether and when to switch from the 'tried and true' film-based methods with which they are comfortable to new digital sensing technology. I asked VX Services, a company that supports and builds the popular Vexcel VX image-scanning equipment, how digital images compared to those taken on film and then scanned. They told me that, in either case, the quality of the final product depended upon so many steps and processes that it was impossible to generalise by saying that one or the other technology always gave better results. However, digital imaging is faster and therefore more appropriate for time-sensitive applications such as fire monitoring or targeting ordnance. Film, on the other hand, is very good for long-term storage because it is a very dense and stable medium, and well-understood technology.

'Data Gap'

I asked new ASPRS president, Karen Schuckman, about the 'data gap' increasingly faced by commercial consumers of satellite imagery now that the US government has procured purchase rights to the majority of images from commercial satellites. She told me that the large initial investment and long lead times required to launch satellites made satellite imagery technology less responsive to changing imaging needs than aerial imaging. And the United States "has been challenged coming up with a model for funding space-borne observation systems and for that reason we are increasingly relying on systems developed by other countries." One company that would be glad to fill this gap is ImageSat International; demand has led it to build a new satellite which it plans to launch sometime between the Paris Air Show in June and the Singapore Air Show in February of next year.

Inaugural Speech

On the morning of 10th March Karen Schuckman delivered her first speech as ASPRS president to an audience of about three hundred people. After recalling her dread of public speaking as a college student in the early 1970s, she launched into a passionate talk on the key requirements for leadership. Among these were, she said, "the ability â€¦ to make each individual feel more capable." Under the loupe too came the new role of women in the organisation: "One canâ€™t deny that we are at a significant historical moment, having three consecutive women officers when there were only three in the entire 71-year prior history of the organisation." She had something to say about ASPRS: "We have nearly US$ 1 million in reserve funds and an operating budget that consistently produces positive cash flow. We

own our own building outright," and about what drives its members: "We all care about imagery and maps because we really care about something deeper, something that is more common to all human beings, not just photogrammetrists and remote sensing and mapping scientists." In concluding she cited Joseph Campbellâ€™s fascination with pictures taken from space of our planet, which he called the "fragile blue sphere". This reminded me of Carl Saganâ€™s expression, "pale blue dot" and provided fitting continuity with the next speaker, ESRI president Jack Dangermond, who repeatedly referred to Earth as a "blue marble".

A Vision of GIS

Dangermond, very inspiring as usual, outlined his vision of GIS as a powerful tool to help resolve the complex challenges of our crowded world, from globalisation to armed conflict, from environmental change to economic development. Describing GIS as a technique to integrate not just data but also "workflows", he told his audience that GIS was becoming "a new language" and said that it could help humanity "build a common understanding." Going on to focus upon the trends currently driving the development of GIS, he identified four. First was the growing number of geographic measurements due in part to the availability of new sensors, second was the growing integration of GIS with other technologies, third the increasingly distributed and networked nature of GIS, and fourth the emergence of GIS portals.

While the old "mantra of GIS" had according to Dangermond been "Iâ€™ll share my data" the new would be "Iâ€™ll share my data models." As an example he pointed to how data models originally developed by hydrologists were now being used by urban planners. "GIS networks," he predicted, "will allow us to connect and integrate distributed GIS resources, making virtual collaborations possible" and leading to "a kind of global GIS." This global integration, he cautioned, would not be perfect; for example, we will still have to deal with images at different resolutions and differing classification techniques, and the end result would be more analogous to a library than to an encyclopaedia. However, he concluded, the role of geospatial professionals would remain the same: understanding user needs, providing data services, supporting applications, managing organisations, and supporting technical infrastructure.

I asked Dangermond whether he saw any tension between open standards and proprietary software development. His answer was simple and forceful: "If you are not â€˜openâ€™ you will not last. Evolution will take of it.

More information on this conference is to be found in the 11 March issue of GISmonitor: www.gismonitor.com.
