Conference attendees seeking best route to improved computer mapping systems

GeoWeb 2007 looks at ways to connect and co-ordinate GIS technology's multiple formats

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Geographic Information Systems are widely used by both consumers and industry, but when it comes to sharing information through computer-based mapping technology, everyone's an island.

A variety of incompatible formats is one of many issues that have arisen as mapping systems become technological workhorses used in applications ranging from global business networking, disaster response, defence and security to helping Joe Consumer find the nearest pizza joint.

GIS communications and infrastructure issues will be top of mind at the July 23 to 27 GeoWeb conference, as they were at last year's event, which is hosted annually in Vancouver.

This year's keynote speakers at GeoWeb, which is being held at the Morris J. Wosk Centre for Dialogue, include GIS heavyweights such as **Vinton Cerf,** vice-president of **Google** and widely known as the "father of the Internet"; **Jack Dangermond**, founder and president of GIS software giant **ESRI**; **Vincent Tao**, director of the **Microsoft** Local Search and Virtual Earth business unit; and **Michael Jones**, CTO of **GoogleEarth**.

In addition to these technology heavyweights will be other attendee companies that have become leaders in specialized corners of the mapping industry, such as Surrey's **Safe Software**, which makes applications that help to translate and transform spatial data between formats.

Since 1993, Safe has exploited a marketplace that has created multiple proprietary formats that don't communicate with each other. The company's first client was the B.C. government, which needed to integrate its extensive database of maps of the province into international databases of other governments. At the time, because of resource exploration, B.C. was one of the world's most extensively charted regions.

Dale Lutz, co-founder and president of Safe, said that for years, nobody was looking to the future when converting maps and spatial information into computer language.

"Basically every country in the world invented at least one [mapping format], every software company that deals with mapping invented at least one," said Lutz.

Galdos Systems founder Ron Lake: "how do we get these organizations to work together"

"Some of them invented dozens over the years."

As information sharing over the Internet spread, Safe developed its FME (feature manipulation engine), which can support and translate 191 different mapping formats.

In recent years, GIS has become accessible to consumers, who have enthusiastically embraced mapping technology through Internet tools such as GoogleMaps. This has accelerated the urgency among mapping industry leaders to distill the number of spatial data languages into a standardized few.

At GeoWeb, roughly 50 different conference papers will be presented and 17 workshops will discuss standardization and other GIS issues.

Some attendees at this year's GeoWeb are also members of the **Open Geospatial Consortium** (OGC), the standards organization responsible for geospatial and location-based services.

"The biggest impact of something like GoogleEarth has been to make the general public aware that there's all kinds of people that for many years have been worrying about these kinds of problems," said **Ron Lake**, inventor of the geographic markup language (GML) and founder of Vancouver-based **Galdos Systems,** which automates the flow of geographic information from provider to consumer.

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> – Dale Lutz, co-founder and president, Safe Software

Lake was in Paris earlier this month to take part in OGC technical committee meetings, which were held to address the development, evaluation and approval of standards to build and deploy mapping formats that are interoperable in the larger IT domain.

Lake, GeoWeb 2007's organizer, said that two main drivers are changing the Internet from a web-type network of file folders into a network that takes into consideration geographic space and location:

- consumers are demanding web browsing with more relevance to local geography; and
- public and private business entities are functioning in a global network and thus are all affected by spatial considerations.

As examples of how mapping technology is being harnessed across a wide range of industries, Lake pointed to maintenance workers who can identify the location of a burnt-out streetlights using GIS information, and resource exploration companies that can view computer-based spatial representations of a mine that's 3,000 kilometres away.

But with so many different formats in industries from gaming to automotive to navigation, he said the biggest problem is getting everyone to agree on a standard.

"How do we get these organizations to work together [to] allow the kind of sharing of information that is critically important – really for the future of society?" ■

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