The Web of the Future — GeoWeb 2006

GeoWeb
2006

The World Wide Web is no longer about passively surfing and reading, but about doing — sharing, socializing, collaborating, and creating. This phenomenon is having an impact on the geographic Web, or "GeoWeb."

Both consumers and a multitude of industries are taking advantage of new online tools that integrate geographic data and maps into work processes and leisure activities. This topic was top of mind when more than 250 of the GIS industry's leaders gathered for the annual GeoWeb conference at the end of July in Vancouver, British Columbia, Canada.

GeoWeb 2006 was organized by Galdos Systems and supported by the Geospatial Information Technology Association. The event explored the business and application possibilities associated with the convergence of GIS and the Web. Many of the largest players in the Internet and geospatial markets demonstrated their commitment to the evolution of the GeoWeb through active participation and financial contributions.

Keynote speakers at the GeoWeb conference included Stephen Lawler, general manager of Microsoft's Virtual Earth; Michael Jones, chief technology officer of Google Earth; and Kurt Cagle, author and technology architect at Mercurial Communications. The conference also included 13 interactive workshops centered on open standards and various Web-mapping and related technologies.

Professionals are growing more and more dependent on the sharing of the world's critical geographic information to be more responsive, and in some cases, to save lives. World events — including natural disasters and ter-

rorist attacks, the increasing movement of people (which leads to faster and broader disease outbreaks), and the continued pressures on industry to be more productive — are prompting public and private partners to work together to share geographic data and eliminate inefficiencies. To this end, key themes emerged from the conference that will likely be debated and discussed for years to come. Themes included the conceptualization, development, and monetization of the GeoWeb.

In much the same way we think about the Internet, the GeoWeb is a

As argued by many conference delegates, the ability to share data should be driven by a desire to provide solutions to pressing problems. When a natural disaster strikes, many organizations are mobilized, and all units must have reviewed all of the data from the incident scene to prepare action plans. Access to critical, real-time geographic data ensures that all organizations work from a common operations perspective. Through the GeoWeb, each agency can have access to complete and real-time geographic data to help assess the scale of the disaster — the extent of the geographic

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globally integrated collection of geospatial databases. One can visualize the GeoWeb as a layer of the Internet stack that concerns itself with the seamless sharing of geospatial information. Integration of and access to vast stores of data across the globe are pivotal components to an operational GeoWeb. As a result, the GeoWeb will require transparent access to geospatial data across multiple jurisdictions.

location of the incident; the types of buildings affected; the impact on power, gas, and water grids; updates on personnel movement as live information arrives from various agencies; and more. Real-time sensor data will be shared over secure wide-area sensor networks. Security is central to an operational GeoWeb, and as such, its development will yield new and innovative approaches to data and Internet security.

What's the GeoWeb For? The widespread adoption of open standards that support real-time sharing and publishing of geographic information will, in simple terms, enable the global sharing of geospatial information. Certain markets will be more motivated to advance the GeoWeb, and as such, we can expect it to develop through the creation of applications in such markets as homeland security, transportation, infrastructure planning and development, and environmental protection. As these applications evolve, so will the interconnection of these systems.

As Google Earth and Virtual Earth increase their active user base, consumers will become more and more aware of the benefits to accessing real-time information about their environment for daily decision making. The GeoWeb has already turned the real-estate industry on its head: Access to real-time satellite photos and maps of houses for sale has virtually eliminated the "drive by" that homebuyers resorted to in the past. Other examples of applications include location-based comparison-shopping and location-based advertising. Imagine receiving a coupon to purchase something you're searching for that's within 50 meters of where you're currently located. Such applications will be made possible, thanks to automating the subscription and publication process of data suppliers to consumer-facing applications. This is referred to as managing the geospatial data supply chain.

The Internet's development happened in stages, where those seeing a need for networking adopted it sooner than those unaware of it. This is also how the GeoWeb will get built. However, unlike the Internet, the GeoWeb's development will not be driven only by Western countries. Instead, initiatives are originating simultaneously from many parts of the world, including China and the Middle East.

Monetizing the GeoWeb. Some key questions raised at the GeoWeb conference focused on concerns regarding the money flow from consumers of end-user services back to intermediary applications and, ultimately, to data suppliers. Currently, geoportals buy data in bulk from governments and corporations (for example, NAVTEQ and Tele Atlas). With the GeoWeb, data bulk purchasing will likely give way to more finely grained data updates. This will likely increase the quantity of free data, and, much like the battle of open- and closed-source software, will dramatically impact the pricing models and even the business models for data providers.

As with any new market, there will be a multitude of opportunities associated with the GeoWeb, some lucrative, some not so lucrative. Given the economic impact of the Internet, it's fair to assume that the economic potential associated with the GeoWeb will be very significant.

Above all else, the more important achievement of GeoWeb 2006 involved bringing together some of the world's leading thinkers with the largest companies and organizations to discuss a common goal. The event drew more than three times the number of attendees as GeoWeb 2005, and Galdos Systems expects that the audience will at least double for GeoWeb 2007. It's an exciting time for the geospatial industry and the Internet, as we race toward an era of increased information and interaction with the world around us. For more information about GeoWeb 2007, please visit www.geoweb.org. **— Amielle Lake, Galdos Systems, Inc.** ⊕

Courtesy of Galdos Systems, Inc.

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