

GeoWorld's December 2003 Industry Outlook

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Technological Advancements: Enterprise Integration

At this stage in the development of geotechnologies, Enterprise Integration has the most promise for transforming their use. Enterprise integration includes linking both spatial services to other geospatial services, and spatial services to other business processes. OGC's interoperability framework, which, by the way parallels the U.S. government's enterprise architecture, is a key part of this new world of linked services.

Built from Web Map Services, SensorWeb, OpenLS and other past and ongoing initiatives, this interoperability framework provides a stepping-stone toward an integrated technology vision for business, government and education at one level; and for better decision-making worldwide, at another.

Specifications, in and of themselves, don't make enterprise integration possible. That requires a vision or a "how to" document. OGC has put together several reference architectures (for Web Services, for Critical Infrastructure Protection, etc.) that lay out just how to work with standards and standards-based commercial off-the-shelf products to build an enterprise solution for today and tomorrow. Building on open standards, with open architectures, ensures freedom of choice for technology users, and at the same time puts the pieces in place for the growth of national and global spatial data infrastructures.

Markets: E-government services

Market growth in geospatial technology is, not surprisingly, happening in many sectors at once: defense, homeland security, location-based services, environmental monitoring and many others. Underlying many of these is the growth in demand (and supply) of e-government solutions. This vision of moving much of the "work" of government from live personal transactions to digital communication via the Web, e-mail and other techniques has shown tremendous progress.

E-government geospatial initiatives are maturing at the federal level as we see with Geospatial One-Stop, The National Map, HazardMaps.gov and others. But this growth is just the beginning, as the "best practices" of these efforts pass down to states, counties and municipal governments. OGC's work on the Geospatial One-Stop portal will make it easier for not just the federal government, but smaller communities to establish flexible portals based on Web services. The soon-to-be-released *Guide to Standards Based Portals* will support e-government growth at all levels, worldwide.

Standards are a key part of that multi-vendor choice and insure a few important things happen as we build more and more portals across the U.S. and the world: (1) technology buyers, like municipalities, don't feel locking into a single system and can "swap out" components as new, better ones come along, (2) software developers can compete on what they do best (say building a component map rendering) and not worry about building a entire system, and (3) decision makers can consider the use of standards-based open source components in portals, something more and more organizations are finding cost-effective.

Geotechnology Business Climate: Technology spending trends

As technology grows and changes and our information needs as a global community change, how we spend our money also changes. In the early days of geospatial technology the focus was on data collection and maintenance. Once data was available at a reasonable level of accuracy, the focus was on applications to take advantage of that data. Now, technologists are decoupling those applications and redeploying them as focused Web services. Vendors are beginning to offer those services as key components of decision-making tools for the public and private sectors.

Consumers are using free and fee-based Web and location-based services, while businesses and the public sector tap into these streams of data and tools to provide real-time decision support systems to better achieve their goals. These spatial services allow their customers to focus their needs and take advantage of custom models and visualizations from a variety of data sources.

HazardMaps.gov and GeoData.gov characterize this shift in investment. These two federal initiatives tap into Web services for focused uses in the case of the former, and more broadly based resources for the latter. Built on open standards, these portals and Web services applications epitomize where investments are likely to move in the coming months and years.