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JULY 20-27, 2009 ■ VOL. 43, NO. 24



ERIC LAVOCCO

## Dossier

**Name:** Jack Dangermond

**Title:** Founder and president

**Organization:** Environmental Systems Research Institute Inc.

**Location:** Redlands, Calif.

**Favorite technology:** “None. I use all kinds of technologies, but I’m not a technology geek. I just see technology as something I use to do things more effectively and efficiently.”

**Greatest ambition:** “To create neat places to be. I studied landscape architecture and urban planning for that very reason.”

**Favorite nonwork pastime:** “Working in my garden and doing garden design.”

**If I hadn’t gone down this career path I’d be ...** “A landscape architect.”

### ■ THE GRILL

## Jack Dangermond

The **GIS trailblazer** talks about how business has embraced **geographic systems** and where the technology is **headed next**.

*With the founding of ESRI 40 years ago, Jack Dangermond pioneered the business of geographic information systems (GIS). He shares his perspective on how the Web has democratized access to geographic information, and how mashups between GIS and traditional information systems are transforming the way companies view and analyze business data.*

**You have been at this for more than 40 years. During that time, what would you say has been your greatest accomplishment?** Creating a product organized around geography. I don’t think it was inevitable that geographic information systems would have come into being in the way they have.

Mapping, sure. Visualization, yes. We see it now

all over the Web. But the notion of creating a unique information system about geographic stuff is largely what ESRI is known for. We didn’t author the idea . . . but we commercialized it.

**What do geographic information systems do today?** The geographic approach is not simply putting dots on maps or simple visualization, but

the incorporation of many layers of geographic measurement. The powerful vision here is not just making a map but integrating all of the factors that should be considered. Fast-food chains use [GIS] as their framework for site selection and also for market analysis — that is, to determine what the market is for particular products or services.



“While we started in government, what’s occurring today is making [GIS] pervasive throughout computing.”

It’s data management, it’s data processing with complex data, it’s multiuser access and processing, it’s integration with other IT layers like data management and Web services. It’s powerful visualization, 3-D rotation in real time, photography, the ability to handle complex models that are science-based. It’s about integrating many types of measurements — GPS measurements, remotely sensed measurements. It’s a complex technology.

**What is your vision?** To use information technology and specifically geographic information systems to make a difference. It started with using computer

mapping tools and rational thinking for doing environmental planning projects, but it has now become a full IT system for integrating all sorts of scientific and geographic information into all human activities. This is the story of what GIS is about today. And I believe that it is just beginning. While we started in government, what’s occurring today is making it pervasive throughout computing.

**Why should businesses care about GIS?**

**What are the business benefits?** One benefit is efficiency. We’ve seen huge return on investment, for example, in logistics. Sears invested \$4 million to build a system, and they saved \$43 million a year as a result of automating their trucks for delivery.

The second one is that GIS leads to better decisions. Using the geographic approach, people tend to consider all of the factors in decision-making, not just a few. Location matters, and considering all of the factors in an analytic environment helps.

The third is that it improves communication. Maps shared about a particular topic between departments, or between government and citizens, or between businesses and customers, improve communication. People can talk about where it is, and they can see patterns and relationships, and that brings better understanding about what’s going on.

**When you founded ESRI in 1969, what was your original goal?**

I thought it would be great to have an organization where people would use rational and analytic tools and geographic information as a foundation for making better decisions.

This was a time when the environmental movement was just getting started, and my interest was in finding rational methods that could resolve a lot of the conflicts and debates with good information and analysis.

When I moved back to California, I had the opportunity to start ESRI. We began doing environmental planning projects using some of the computer mapping and analytic tools that had been built up in the [Harvard University] lab. This evolved for about 10 years,

until we moved into the vision of creating products which would leverage all of our planning and rational-methods work into a product.

**How has GIS evolved?** In the early years, GIS was largely a proprietary technology. It invented its own standards for doing things. GIS has moved from that position to using IT standards and standards-based technology. That has led to the embracing of GIS by the IT community as an enterprise platform. In the state of California, the new CIO just released a policy that makes GIS one of the six major IT platforms at the enterprise level for the state.

Today, we are focused on the Internet. That promises to leverage all of the knowledge that we and our users have been building over the years and make it much more available and accessible. It’s the vision that we’re currently working under — the notion that we bring together all of the knowledge of GIS and harness that with what today is the Web 2.0 environment.

Both the accommodation of GIS on the Web and the integration of GIS into mobile devices is going to make GIS pervasive and fundamental to all human activities.

That is far beyond our original vision 40 years ago but follows the natural evolution of where the spatial dimension of computing leads. We’re excited about the notion that geography matters, and that we can use it as a dimension of computing.

— Interview by Robert L. Mitchell



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