

GIM INTERVIEWS LISA CAMPBELL, VICE-PRESIDENT, AUTODESK MARKETING INFRASTRUCTURE SOLUTIONS DIVISION

Committed to Open Standards

Seven million users around the world make use of Autodesk software and services in the fields of infrastructure, manufacturing, building, media and entertainment, and wireless data services. This month's interviewee is vice-president in charge of marketing and product management for the Infrastructure Solutions Division at Autodesk Inc, a "Fortune 1000" company founded in 1982 and headquartered in San Rafael, California, USA. We interviewed Lisa Campbell at Intergeo 2006 in Munich.

What are the main products and services of the Infrastructure Solutions Division?

The Infrastructure Solutions group provides mapping, civil engineering, and infrastructure management solutions. These products help geospatial professionals and civil engineers collaborate and share mapping and design information so that they work more productively, streamline business processes, increase profit margins, deliver better services and extract greater value from mapping and design data. Products include Autodesk Civil 3D, Autodesk Map 3D, Autodesk MapGuide Enterprise, Autodesk Topobase and Autodesk Raster Design. With respect to the infrastructure sector, Autodesk was the first major software company to bring dynamic, vector-based and interactive online maps to the consumer market, and has been developing web-based GIS software since the mid-1990s.

How big is the Infrastructure Solutions Division in terms of number of employees and share in turnover?

Revenues from the Infrastructure Solutions group, which includes solutions designed specifically for geospatial and civil engineering, in fiscal year (FY) 2006 represented approximately 12% to 13% of Autodesk's total revenue. In addition to these discipline-specific products we estimate approximately 15% to 20% of AutoCAD customers are using it for infrastructure-specific applications. Our total market share for GIS and mapping products is estimated to be 5% to 6% and we expect that the company's market share in geospatial technology will continue to grow at 20% to 30% per year. Since the overall GIS market is growing at only 4% to 5% annually we expect to take market share from competitors.

Who do you consider to be your main (inter)national competitors?

We compete in some areas with the traditional GIS vendors, as well as with specific regional vendors. Competition varies based on the country. Autodesk has always led the market in web-based GIS. In fact, we hold the patent for technology to deliver vector-mapping data across the internet, so it should come as no surprise that we continue to lead the market. In contrast to some competitors, we work closely with the open-source community to offer better solutions for web-based GIS and distributing maps online. Users prefer our products' ease of use for map authoring and web-publishing. Developing custom applications with our software is less time-consuming than using other technologies, providing a more effective Application Programming Interface (API) and enabling direct access of multiple data formats. As part of our commitment to data integration in our GIS product line, our geospatial solutions support a variety of file formats from competitive technologies, including ESRI SHP and coverages, MapInfo MIF/MID, and Microstation DGN.

Who are your main clients and how is your customer-base distributed over the continents?

Our main clients in the geospatial field are engineering and construction firms, communication and utility organisations, government (federal, state, local and national) and transportation agencies. We do not break down our product revenues by geography, but 40% of Autodesk FY2006 net revenues were from the Americas, 36% from Europe, Middle East and Africa and 24% from Asia Pacific.

What are the prospects for the GIS market in the rapidly emerging economies of China and India?

The demand for infrastructure development and modernisation is strong around the world. In India and China, in particular, economic development and population growth are putting an enormous strain on existent infrastructure resources. To rapidly create an infrastructure system that meets their growing needs infrastructure providers including utilities, governments and engineering groups are turning to advanced technology that speeds development processes and improves efficiencies and costs. Geospatial information solutions give organisations visibility into their asset data through a graphical interface that is easy to use, manage and share.

How do you anticipate opportunities emerging in Asia?

We expect that our geospatial solutions will continue to serve as the preferred tools to meet these needs in these fast-emerging markets. As a global company we have conducted business in these regions for many years. Early on we established local development teams to ensure that our products addressed the unique needs of these markets. Our products in these markets are not simply translations of North American tools; rather, we design and build geospatial software products specifically for use in Asia and elsewhere, incorporating local standards for GIS and engineering. Rather than using Asia as an offshore IT helpdesk weâ€™re tapping into the phenomenal talent and knowledge-base there to fuel the innovation of our next-generation software.

What are the prospects for Africa, South America and the Middle East?

In addition to growth in Asia, we continue to experience growth in Africa and South America. Customers there look to Autodesk for insight into the ways growing nations and cities around the world are designing, constructing and managing their infrastructure. For example, we hosted the government of Chile earlier this year at our headquarters in California. In the Middle East we are following the same successful strategy adopted in other regions, making sure that we have a full understanding of the market needs, culture, changes and growth taking place there. Itâ€™s paying off, and our geospatial and civil-engineering software team is working with the transportation ministry in a large Middle Eastern country. We expect that our investment in the Middle East will increase in the future and that weâ€™ll be well positioned to address this emerging market.

How will the rapidly evolving distributed web service influence the GIS market?

Distributed web services have the opportunity to bring geospatial information into the IT mainstream by enhancing the delivery speed and flexibility of new online mapping applications. More importantly, however, web services give customers and application developers the freedom to choose IT platforms that best fit their standards and expertise, making systems integration much faster and easier to maintain. Customers can now use web services to seamlessly integrate geospatial information with enterprise systems, eliminating the need for proprietary tools and difficult-to-maintain batch processesâ€

...Seamless integration requires open standards. How is your commitment to these?

Web services have been influencing the GIS industry since the introduction of Open Geospatial Consortium (OGC) standards for Web Mapping Service (WMS) and Web Feature Service (WFS). Like our commitment to the Open Source community, Autodesk support for OGC and other web services is a key component of our commitment to open standards. For instance, Autodesk MapGuide publishes and uses WMS and WFS; Autodesk Map 2007 can use these services as well. And Autodesk Topobase is based on Oracle 10g, so that our customers can take advantage of all the rich web-services capabilities of the Oracle platform. While web services are important for systems integration, they are no silver bullet. We also offer customers the performance and responsiveness that Autodesk Map 3D and Autodesk MapGuide Enterprise provide, with direct access to their geospatial data using the Feature Data Objects API.

Since its launch in June 2005 Google Earth has attracted much attention, not only from casual users but also from GIS professionals. How do you think Google Earth will change the use of geo-information and GIS?

Google Earth has broadened public awareness of the possibilities of geospatial information. As a result, demand has grown beyond the traditional GIS applications. Today, weâ€™re seeing GIS data being integrated and applied in more business functions, including engineering design, operations management and Enterprise Resource Planning (ERP) systems. Visualisation is a key component of Google Earthâ€™s appeal, and it has given GIS providers both the opportunity and challenge to provide more advanced and innovative geospatial applications. At Autodesk we recognised that our customers wanted more realistic views of how a design or project will look, so we incorporated more visualisation technology into our mapping products. What is more, our tools provide a level of precision and accuracy that is greater than anything possible with Google Earth.

Do you co-operate with major data providers, universities and research institutes to improve and innovate in terms of your products; please elaborate?

Our software is primarily developed internally, although the company does contract with software development firms, consultants and other outside parties to supplement our own efforts. We also have a network of third-party developers who create their own products that expand the functionality of our software. We are committed to an open-architecture design that facilitates this third-party development. In addition, in early 2006, we officially released MapGuide software and Feature Data Object (FDO) providers to a broad community of open-source geospatial developers. Under the umbrella of the Open Source Geospatial Foundation (OSGeo, www.osgeo.org), the open-source community is actively collaborating to develop innovative new applications with the software provided by Autodesk. In turn Autodesk offers supported and professionally tested versions of the technology. We are proud to work as closely as we do with the open-source community and to collaborate with hundreds if not thousands of developers worldwide.