



Microsoft Customer Solution

Case study

“Cost, scalability and manageability are the three hottest items in IT. With Microsoft technologies incorporated into our Magi Application Express solution, our customers have confidence they’re working with a solution that scales, is easy to manage, and performs as needed.”

Gregory Alan Bolcer
Chief Technology Officer
Endeavors Technology

ISV Accelerates and Increases Sales with Server-Based, Web-Enabled Product Trials

With each release of its AutoCAD software, Autodesk spent significant amounts of money mailing CD-ROMs to existing and potential customers. Although a standard technique for introducing new software, Autodesk wanted to reduce its delivery costs, accelerate and increase sales, and reduce the risk of software piracy. To meet these business goals, Autodesk deployed an application delivery solution offered by Endeavors Technology. The new solution, Magi Application Express, derives its scalability, ease of management, and near 100-percent availability from Microsoft Windows 2000 Server, SQL Server, and Internet Information Services (IIS) Web server. With this solution, Autodesk achieved ROI within six months, continues to slash expenses, and reports increased and accelerated sales.

CUSTOMER PROFILE	BUSINESS SITUATION	SOLUTION	BENEFITS
Based in San Rafael, California, Autodesk® offers design software and digital content to more than five million users in 160 countries across a variety of fields, including building, manufacturing, digital media, and wireless data services. The company employs more than 3,600 people and reported U.S.\$825 million in revenues for fiscal year 2003.	Although an important part of Autodesk’s marketing strategy, sending trial versions of its AutoCAD® design software on CD-ROM to potential customers is expensive and, in terms of effectiveness, rather sporadic in success. Autodesk needed a trialware delivery solution that reduced costs, increased and accelerated sales through qualified leads, and reduced the risk of software piracy.	Autodesk deployed a server-based and Web-enabled application delivery solution using Magi Application Express®, offered by Endeavors Technology and supported by Microsoft® Windows® 2000 Server, SQL Server™, and Internet Information Services (IIS) Web server. With the solution, Autodesk offers potential customers a full-product AutoCAD software trial online.	<ul style="list-style-type: none"> ▪ Increased and accelerated sales ▪ Improved lead generation and management ▪ Reduced costs associated with the delivery of AutoCAD software trials ▪ Enhanced security without compromising the quality of software trials offered to potential customers

Situation

“No one has seen this kind of performance in CAD trial software. Streaming AutoCAD using the Microsoft-supported Magi Application Express solution allows users to be up and running in just five to 10 minutes. During the pilot phase, we found that a higher percentage than normal of trial users were influenced to buy our product sooner than they originally planned and many bought more product than anticipated.”

Robert Ng

Director of Business Planning & Analysis
Autodesk

Autodesk®—based in San Rafael, California—offers design software and digital content to more than five million users in 160 countries across a variety of fields, including building, manufacturing, infrastructure, digital media, and wireless data services. The company employs more than 3,600 people in 83 offices around the world. Autodesk reported U.S.\$825 million in annual revenues for fiscal year 2003.

Autodesk organizes its business and product solutions around the following divisions:

- **Building Solutions Division**—provides building information modeling solutions and collaborative services for architects, engineers, contractors, owners, and other building industry professionals.
- **Discreet**—develops systems and software for motion picture visual effects, non-linear editing and finishing for film, television, and the Web; 3D animation and

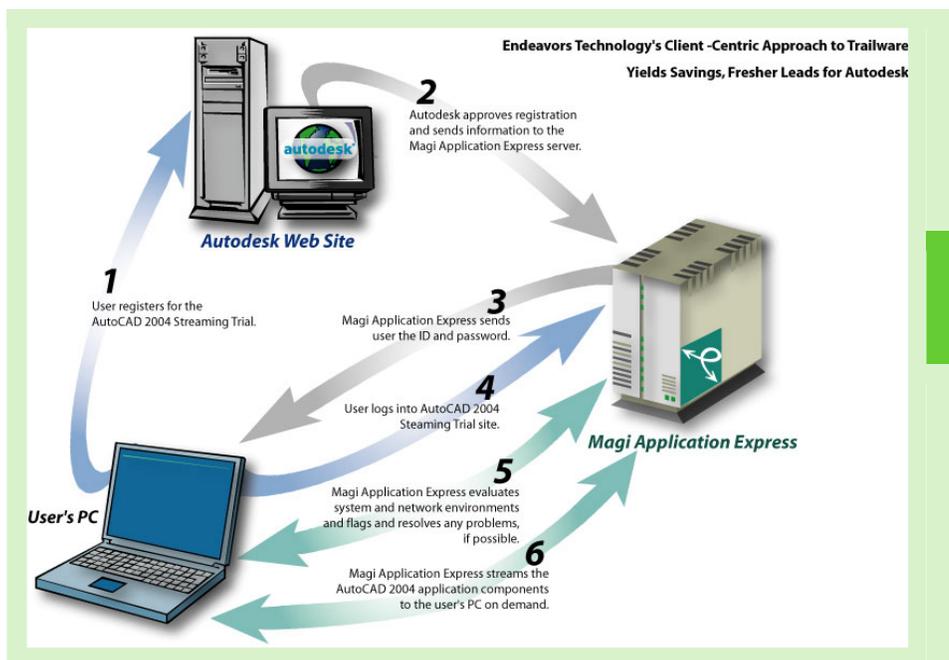
design visualization software; and desktop video encoding, streaming, and compositing software.

- **Infrastructure Solutions Division**—offers mapping, civil engineering, and infrastructure management solutions.
- **Location Services Division**—provides wireless network operators and enterprises with solutions for location-enabled wireless services.

AutoCAD Pilot Program Results

Trial Site Users	7,000 Users
Users influenced by trial site to purchase software	3,360 / 48%
Decided to purchase sooner	1,109 / 33%
Purchased more product than anticipated	235 / 7%
Minimum estimated sales increase during eight-month pilot program	U.S.\$228,500

The streaming trial process powered by Magi Application Express and Microsoft technology.



- **Manufacturing Division**—develops software used in a variety of fields, including industrial machinery, electro mechanical, tool and die, industrial equipment, automotive components, and consumer products.
- **Platform Technology Division**—focuses on technology for general design and drafting professionals. This division develops and markets AutoCAD®, a 2D drafting, detailing and 3D design tool, which represents one of Autodesk’s major product offerings.

A Lengthy, Unreliable, but Crucial Process

With each new release or update of its AutoCAD design software, Autodesk sends out hundreds or thousands of trial CD-ROMs to existing and potential customers. Typically, the company pays \$2 to \$10 per CD-ROM depending on how and where the disks are mailed. With a significant number of CD-ROMs delivered during a major upgrade or product release, postage quickly adds up, says Robert Ng, Director of Business Planning and Analysis for Autodesk.

Although a common and necessary practice in the technology industry and an important component of Autodesk’s sales and marketing strategy, mailing trial CD-ROMs presents other challenges as well:

- **Lengthy process**—according to Ng, it typically takes two to four weeks for potential or existing customers to receive an AutoCAD trial CD-ROM;
- **Unreliable process**—several scenarios can unfold after the CD-

ROMs leave the Autodesk warehouse. For example, the CD-ROM may never reach the person intended. If it does reach its intended destination, the potential customer may or may not have had time to load the trial CD-ROM before being contacted by an Autodesk sales representative. Also, technical difficulties may prevent successful use.

- **Security and quality issues**—The risk of software piracy requires Autodesk to implement security code, which often detracts from the quality of the AutoCAD trial, preventing some users from fully experimenting with the software’s complete range of functionality.

Despite these limitations, Ng says, AutoCAD’s complexity and size—a 500 MB file—left few if any alternatives to mailing out CD-ROMs.

“Mailing CD-ROMs represents a slow and wasteful way of operating,” Ng says. “Nevertheless, it’s been the only feasible way to get our software out there so people can have a look at it. And our customers want to have a look ; they don’t make impulse purchases. These software trials are absolutely critical to our sales and marketing efforts.”

Because of the important role software trials play in ensuring Autodesk’s continued growth and success, the company needed an application delivery solution that would increase and accelerate sales through qualified leads, reduce costs associated with conducting its trialware program, and reduce the risk of software piracy without affecting trial quality.

Solution

To meet its business goals and do more with less, Autodesk decided to use a

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server-based, Web-enabled application distribution and management solution. This would allow Autodesk to stream trials of AutoCAD to a large pool of prospects through a rapid, cost-effective, and piracy protected deployment.

Microsoft Technologies Eliminate the “Gotchas”

After monitoring the available technology for about five years, Ng says Magi Application Express®—offered by Endeavors Technology and enabled by Microsoft—came to the fore as the best solution.

Endeavors Technology—based in Irvine, California and a subsidiary of Tadpole Technology—develops Web-based products for transferring and sharing digital information. For example, Magi Application Express streams any Microsoft® Windows® application or large data set on demand over the Internet, giving users an efficient way to deliver software to intended markets while lowering the costs of trialware initiatives.

Gregory Alan Bolcer, Chief Technical Officer for Endeavors Technology, says the company’s use of Microsoft technologies like Windows 2000 Server version 5.0, SQL Server™ version 7.0, and Internet Information Services (IIS) Web server version 5.0 helped put Endeavors in a leading position with Autodesk’s search for a trialware vendor.

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“With Microsoft technologies incorporated into our Magi Application Express solution, our customers have confidence they’re working with a solution that scales, is easy to manage, and performs as needed.”

Because of the customer confidence inspired by Microsoft solutions, Bolcer says Endeavors Technology had its product certified for Windows Server™ 2003 in late June. This set in motion future plans

to upgrade its solutions and take advantage of new development tools within the Microsoft .NET Framework, such as ASP.NET and Visual Studio® .NET, which enable rapid and XML-based application development.

Magi Application Express and Microsoft in Action at Autodesk

When potential users request an online trial, the trial site first determines whether the PC to receive the components satisfies the minimum requirements needed to install and run the streaming trial software. For example, a key requirement is sufficient bandwidth. If the trial site detects any problems, it flags these errors and suggests ways to correct them and proceed.

If all the requirements are met, the streaming trial client and AutoCAD cache are downloaded to a virtual drive on the user’s PC. Icons to access the AutoCAD trial and the accompanying Express Tools are placed on the desktop. Users register, receive an email with their passwords and links, log on to the trial site, download and install the software—all within a matter of minutes.

The AutoCAD streaming trial runs behind the scenes through a server system managed for Autodesk by Endeavors Technology. The server system delivers the initial software download and controls and monitors the clients connected to it.

The server infrastructure uses three primary Dell™ PowerEdge™ 2300 servers, with dual Intel® Pentium® III processors, 600 to 700 MHz, and 1.5 to 2 gigabytes of memory. The application server runs Windows 2000 Server version 5.0; the Web server runs Internet Information Services (IIS) version 5.0, and the database server runs SQL Server version 7.0.

Endeavors Technology uses another set of three Dell PowerEdge 2300 servers with mirrored applications and identical specs for load balancing and failover. Other disaster recovery techniques and

technologies in use include a replicated database, a tape back-up system, RAID-protected hard drives, and a redundant Internet connection.

A variety of other Microsoft technologies support the Magi Application Express solution used at AutoDesk, including Windows 2000 Terminal Services for server administration, Windows 2000 Performance Monitor for monitoring the system's usage and performance, and Exchange Server 2000 is used on a different system within Endeavors Technology to route all trialware registration, support, and feedback email. For example, once a user initiates or completes the 30-day AutoCAD trial, Endeavors Technology notifies Autodesk's sales representatives, who follow up with the users.

Autodesk first piloted the Microsoft-supported Magi Application Express solution in August 2001 with its release of AutoCAD 2002. According to Ng, the trial site adds about 350 to 400 new users a week and averages 1,400 user sessions per week. Each user spends about five hours per week on the 30-day trial.

With the release of AutoCAD 2004 in early April of this year, Ng says it became an "officially anointed" part of Autodesk's sales and marketing program—a significant part that has reduced the number of CD-ROMs sent out through the mail, added to the company's bottom line, and improved the security and quality of its trialware program. These benefits as well as others are detailed in the next section.

Benefits

Because the Magi Application Express architecture takes advantage of each trialware user's resources, Ng says, product speed and performance are nearly identical to those of a stand-alone PC with

application software that has been locally installed from a CD-ROM.

"No one has seen this kind of performance in CAD trial software," Ng says.

"Streaming AutoCAD using the Microsoft-supported Magi Application Express solution allows users to be up and running in just five to 10 minutes. During the pilot phase, we found that a higher percentage than normal of trial users were influenced to buy our product sooner than they originally planned and many bought more product than anticipated."

Increased and Accelerated Sales

During the eight-month pilot program with AutoCAD 2002, Ng says, Autodesk surveyed its trial site users about their purchasing decisions. Several thousand of the 9,738 total trial site users who downloaded AutoCAD during the pilot program also participated in the survey.

Of those users surveyed, 48% said the trial influenced their decisions to purchase the software. 33% said the trial's performance prompted them to purchase sooner than they'd originally planned. 7% bought more software than originally planned, delivering an estimated increase in sales during the eight-month pilot of at least U.S.\$228,500.

Improved Lead Generation and Management

When mailing software trials on CD-ROM, sales representatives have a name and address, which may or may not be correct. Mailings take weeks to arrive, and if they do reach the intended destination, the AutoCAD CD-ROM may be hidden underneath a pile of blueprints. Or worse, technical difficulties encountered during installation may have soured the potential customer's opinion of the software. All this uncertainty, Ng says, produces—at best—mediocre sales leads.

With Magi Application Express, Autodesk can track trial site users' activity, including

trial initiation and completion and number and length of sessions. Users can also give instant feedback, and sales representatives obtain current names, addresses, email addresses, as well as confirmation that the customer is familiar with the software and perhaps ready to make a purchasing decision.

Reduced Costs

As stated earlier, it can typically cost Autodesk up to \$10 to mail an individual CD-ROM. If 10,000 people request AutoCAD 2004 trials on CD-ROM, then Autodesk spends \$100,000.

According to Ng, Autodesk pays Endeavors Technology a fixed monthly fee for maintaining the site and downloading an unlimited number of trials.

“It doesn’t take a rocket scientist to figure out that we’d rather pay a fixed monthly fee that allows us to control our budget and deliver an unlimited number of high quality leads than have an expensive, unpredictable marketing expense that produces only fair to poor quality sales leads,” Ng says.

Enhanced Security without Compromising Quality

To prevent piracy, software trials typically involve either downloading a stripped version for concept evaluation or receiving a CD-ROM, which has also been disabled or locked in some fashion.

However, the AutoCAD 2004 trialware delivered by the Microsoft-supported Magi Application Express solution is not just a demonstration product. Instead, Ng says, the streaming trials offer trial site users a

completely functional version that includes the ability to create, view, save, and plot files as normal. Thus, it offers complete operability for the user and complete security for Autodesk.

According to Ng, even Autodesk-sponsored “hacker challenges” haven’t produced a user who can steal the code from the server. And because Endeavors Technology uses a proprietary authentication method that queries machine IDs for log-in instead of user passwords after trial initiation, Autodesk can effectively limit the number of times that the trial software can be used on each machine.

Conclusion: Next Steps

In terms of next steps, Ng says, there are many avenues to pursue, with all of them leading to even bigger contributions to the company’s bottom line. For example, AutoCAD 2004 supports 22 languages. Autodesk hopes to eventually open AutoCAD trial sites for potential and existing customers around the globe.

In addition, Autodesk is exploring opportunities to launch similar streaming trials for its other products.

“We’re not only saving money—doing something better, faster, cheaper,” Ng says. “But, we’re actually accelerating and increasing sales. What’s not to like about that?”

Microsoft Windows Server System™ is the comprehensive, integrated, and interoperable server infrastructure that helps reduce the complexity and costs of building, deploying, connecting, and operating agile business solutions. Windows Server System helps customers create new value for their business through the strategic use of their IT assets. With the Windows Server platform as the foundation, Windows Server System delivers dependable infrastructure for data management and analysis; enterprise integration; customer, partner, and employee portals; business process automation; communications and collaboration; and core IT operations including security, deployment, and system management.

For more information about Windows Server System, go to:

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For more information about Autodesk's products and services, visit the Web site at: <http://www.autodesk.com/>

For more information about Endeavors Technology's products and services, visit the Web site at: <http://www.endeavors.com/>

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