



Innovative OCC Trialware Approach Improves Autodesk Sales and Time-to-Purchase



SOLUTION SUMMARY

Challenge	For complex software applications, hands-on trials are crucial to making the sale. But at roughly 500MB, Autodesk's industry-leading computer-aided design (CAD) applications were too large for conventional Web-based trial distribution.
Solution	An Occasionally Connected Computing (OCC) solution based on publish-and-subscribe technologies is enabling potential AutoCAD* 2004 customers to download and try a fully functioning version of the product within minutes. With this client-centric, on-demand application delivery solution, Autodesk gets fresher leads to deliver to its reseller organization and avoids the need for extensive infrastructure build-out. The solution also offers a fresh approach to companies that want to distribute software efficiently to client PCs.
Business value	Autodesk puts products into its users' hands faster and more cost-effectively, saving \$2-\$10 per user. Autodesk calculates a triple-digit return on its marketing investment. Early experiences have been so positive that Autodesk is exploring plans to make the solution available for trials throughout the company.
Server	Dell PowerEdge* 2450
Trialware software	Endeavors Technology Magi Application Express*
Operating system	Microsoft Windows* 2000 Advanced Server

Business Challenge

EXTENDING A SOFTWARE LEADER'S REACH

With 5 million users in more than 160 countries, Autodesk ranks as one of the world's largest software companies and a leading provider of design and digital content software. Its flagship AutoCAD family is used to increase productivity and accelerate the design of everything from digital content to aerospace engines and from houses to skyscrapers.

The size and complexity of Autodesk's software makes "try before you buy" trials a critical step in the purchase process. Unfortunately, those same traits have also made it difficult for Autodesk to run cost-efficient trials over the Web—until now.

Using Occasionally Connected Computing (OCC) publish-and-subscribe technologies and taking advantage of the resources in the user's desktop or notebook, an innovative application from Endeavors Technology is allowing Autodesk to deliver applications on demand—without server infrastructure build-out and without depriving users of the power of the rich-client applications.

"We've shipped hundreds of thousands of CDs over the years, at a cost of \$2-\$10 per CD, to let people try our software," recalls Robert Ng, director of new business planning and analysis at Autodesk. "Over the years, we've been looking for ways to get away from that, but in the engineering world, it just hasn't been feasible. Now, companies like Endeavors are allowing companies like us to stream our software out to our users and customers, and give our users the kind of performance they expect."

BEYOND TRIAL BY CD: EASING SOFTWARE MANAGEMENT

The software distribution solution that is saving Autodesk money also shows promise far beyond trialware. "This type of on-demand application delivery software is an exciting alterna-

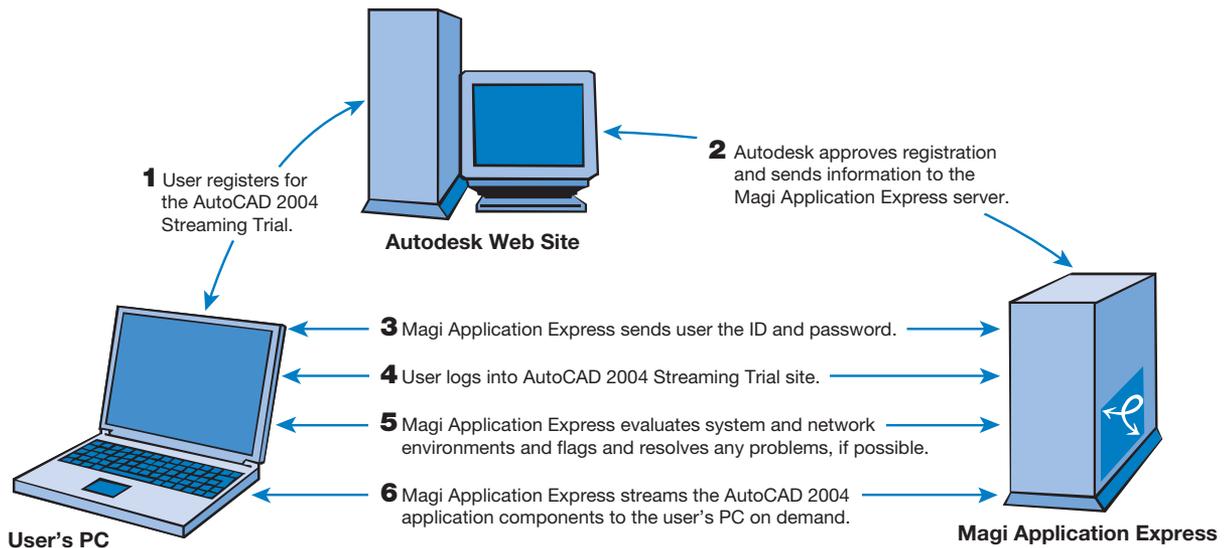


Figure 1. Endeavors Technology's client-centric approach to trialware yields savings, fresher leads for Autodesk

tive for companies that want to lower their PC management costs," says Mark Margevicius, client platforms research director at Gartner, Inc. "It's a great solution for trialware, as the Autodesk example shows, but also a way to lower the barriers for managing client PCs."

Traditional centralized approaches to application distribution and management have had several major drawbacks, according to Gregory Alan Bolcer, CTO at Endeavors Technology. "Even within a single corporation, it's been difficult to deliver large applications to large numbers of clients because of the complexity, cost, reach and lack of scalability," Bolcer says. "In a persistently-connected, thin-client situation, a staging server typically supports 10–15 clients. If you've got 10,000 or 100,000 users to deliver software to, you're talking about a lot of expensive server infrastructure."

With more businesses deploying Wi-Fi* networks and platforms powered by new Intel® Centrino™ mobile

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Autodesk, Inc.

technology, the solution is also well suited to the demands of wireless and mobile environments. "Mobile users might move behind different firewalls," Bolcer adds. "They might be intermittently connected. They might have a pipe with limited bandwidth, so they can't afford to wait for a 200MB or 500MB application."

Business Solution

OCC IN ACTION: ONLINE AND OFFLINE PRODUCTIVITY

Endeavors Technology's Magi Application Express software enables organizations like Autodesk to enjoy the richness and reach of Web-enabled distribution without expensive back-end infrastructure (see Figure 1). The software also

avoids shackling users with the productivity and latency limitations of browser-based approaches.

Using an OCC approach with publish-and-subscribe communications allows users to access data and application functionality whether they are online or off. According to Ng, the Magi Application Express solution is a perfect match with what his customers are demanding. "In today's world, users want to log on, download and go," Ng says. With Magi Application Express' streaming technology, that is exactly what they do.

Autodesk is using Magi Application Express to deliver a 30-day free trial of its industry-leading AutoCAD 2004 to potential customers in North America (see Figure 2). After checking that the user's PC or notebook satisfies the minimum requirements to install and run the streaming trial software, Magi Application Express downloads the streaming trial client. Any connection or installation problems are flagged immediately and resolved if possible.

A Dell PowerEdge 2450 server delivers the initial software download and monitors clients when they are connected to the server. The 10MB–15MB download file is decompressed on the user's PC or notebook and provides enough AutoCAD functionality to get the user started. Because the software is "activated" rather than installed in the traditional sense, users are up and running within 5–10 minutes. That's a significant time savings over a traditional AutoCAD 2004 installation, which typically takes 20–30 minutes to install, even for an experienced support engineer.

APPLICATION CAPABILITY ON DEMAND

As users need additional capability—say, the 3-D lighting and rendering commands or the large libraries of pre-designed objects that users can drag-and-drop into their drawings—Magi Application Express authenticates and validates that the user has permission to run the application, then transparently downloads and installs the additional components. Users have access to the full version of AutoCAD 2004, including the ability to create, view, save and plot files.

Magi Application Express delivers the appropriate application features for each user's system configuration. Users

who have a PC based on a fast Intel® Pentium® 4 processor with Hyper-Threading Technology (HT Technology)¹, for example, receive the HT Technology-enabled version of the application and can benefit from HT Technology's performance-enhancing ability to run two threads simultaneously. "AutoCAD users are always eager for more performance," says Ng. "Hyper-Threading Technology is a good example of the way Intel continues to push the performance envelope."

RAPID RESPONSE

The Magi Application Express servers are also called on to validate user licenses and deliver portions of application features. On the user side, latency delays are virtually eliminated because application components are cached on the user's PC or notebook and run locally, producing a user experience that's virtually identical in performance, speed and functionality to that of a stand-alone PC with software installed from a CD.

The trial is secure and network-friendly. Magi Application Express uses HTTP and HTTPS to work across firewalls and Web proxies. User authentication and encryption key exchanges take place over a Secure Sockets Layer (SSL) connection. Application content is delivered using strong 128-bit encryption to protect it from network snooping. Content is digitally signed to prevent tampering during transmission. Powerful compression techniques are used to minimize bandwidth consumption. "You can't run the software unless you're authenticated," Ng says. "Basically, you can't steal it off the server without stealing the server and the network, too. It's about as piracy-free as you can get."

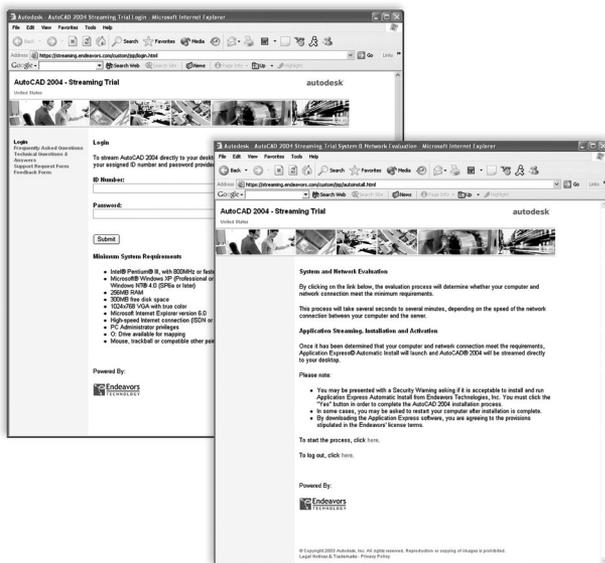


Figure 2. User interface for AutoCAD 2004 Streaming Trial

MORE SALES FASTER

Autodesk began piloting Magi Application Express long before the AutoCAD 2004 launch. After an eight-month

trial, even without any promotion behind it, Autodesk had a base of nearly 10,000 successful users. A typical comment left at the site: "The trial stream is a remarkable piece of technology. I was truly amazed at the performance."

Not only were users happy, but Autodesk was realizing significant business value, finding it could deliver more products, discover more customer opportunities and add more security to the trial process. In Autodesk's pilot implementation, nearly half the participants said the trial influenced their purchase decision, resulting in both accelerated purchase plans and increased unit sales.

"This is an area where you want to be able to provide instant gratification," says Ng. "When you've got an interested customer, you want the product in their hands right then, not three or four weeks later."

COST SAVINGS AND CONVENIENCE

The OCC solution also produced cost savings and provided better sales leads. "OCC Web-based distribution is much cheaper than the cost of manufacturing and shipping a CD-ROM, but that's just the tip of the iceberg," says Ng. "CDs are expensive, and you're pouring money down the drain. You have no assurance of what happens to the disk once it leaves the warehouse. Did the user get it? Did they install it? Did they have the right hardware to run it?"

By contrast, at the streaming trial site, the software checks the user's system to validate the processor, memory, connectivity and other configuration details. "If there's an error, we flag it for them right away, and sometimes they can fix it right away," Ng says. "We have immediate feedback."

The business value continues to accrue after the download. Using Magi Application Express' two-way communication capability, Autodesk can track the user's activity. "We know who's using the software, how much they're using it and what additional functionality they're downloading," says Ng. The software tracks this information and reports it to the server when the user logs back into the site.

That information is valuable to Autodesk's sales teams and reseller organization. "We're way ahead of the game in the information we can provide to the resellers," Ng says. "We can provide much more detailed information, and the leads are fresher, because the user has received the software within minutes of when they requested it."

BROADER IMPACT

Autodesk expanded its pilot Magi Application Express implementation by making the solution part of the official launch for AutoCAD 2004. The AutoCAD trial site is

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Research Director, Client Platforms
Gartner, Inc.

1. Hyper-Threading Technology requires a computer system with an Intel® Pentium® 4 processor supporting Hyper-Threading Technology and an HT Technology-enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. See www.intel.com/hyperthreading for more information, including details on which processors support HT Technology.

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drawing hundreds of unique visitors per week and has hosted nearly thousands of successful trials. In addition, some of AutoCAD’s major customers are interested in exploring the solution for their own software. “They may have thousands of AutoCAD licenses

installed on PCs or notebooks, and once the software is installed, they have a hard time keeping track of it,” Ng says. “With this technology, you can give users the full, powerful, rich-client application, but you get away from all the local, physical interaction. And you maintain control. You know where the licenses are and how much they’re being used.”

Like OCC applications in other areas of the enterprise, OCC-style on-demand application delivery provides flexibility for users whether they are connected to the network or working offline, making them particularly suitable for the expanding universe of mobile applications. “On-demand application delivery is literally on demand, in that the software is delivered in bite-size chunks when the user needs it,” says Gartner’s Margevicius. “If I’m a mobile user or I’m working at home, this solution is obviously a good thing.”

The technology also allows IT departments and outsourcing firms to handle software distribution and licensing more efficiently. “As an IT manager, I can deploy more PCs because they’re more cost-efficient to manage,” Margevicius says. “I can install and deliver software more easily, and I can do it over slow links if I need to reach mobile users or telecommuters.”

As for Autodesk, it is reaping the rewards of its minimal investments in on-demand application delivery. “Really,” says Robert Ng in conclusion, “it’s hard to find a downside.”

LESSONS LEARNED

- **Use Occasionally Connected Computing (OCC) applications to extend the enterprise.** OCC applications use technologies such as publish-and-subscribe and asynchronous message queuing to enhance two-way information sharing and allow users to complete tasks whether they are on the network or off. An OCC-style application delivery solution gave Autodesk a fast, flexible and inexpensive way to reach potential customers. Other OCC applications enhance effectiveness across the enterprise value chain by making it easy for suppliers, channel partners and remote offices to participate in loosely coupled solutions without shoehorning themselves into a one-size-fits-all, end-to-end approach.
- **Consider on-demand software delivery to simplify PC software deployment.** Businesses do not have to deploy thin clients to enjoy the benefits of centralized software distribution. With asynchronous, OCC-style application delivery, companies can combine the power of rich-client applications with the convenience and simplicity of server-centric distribution, while avoiding the heavy server infrastructure required by thin-client applications and traditional server-centric application delivery.
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