



LiquidPrice.com creates an online shoppers' paradise.

Application	Online buyers' marketplace for consumer products and services
Business Benefits	Customer savings of 10% to 25% over traditional retail; zero-overhead sales channel for merchants; Web site launched in two months; development time reduced by two-thirds; ability to process 800,000 transactions per hour
Software	IBM WebSphere™ Application Server, Advanced Edition

You're lounging on your sofa, flipping through a catalog. Then you see it—the stereo system you've hunted high and low for. You close your eyes, snap your fingers and the phone rings. It's the retailer, offering to send you the stereo at an all-inclusive price 15 percent lower than the catalog listing. Sound like a fantasy? In actuality, it's not far from the truth. At least not for those who visit LiquidPrice.com.

The brainchild of brothers Piyush and Prashant Gupta and Alok Singhania, LiquidPrice.com is an ingenious concept—a buyers' marketplace that also offers merchants a virtually zero-overhead channel for generating revenues. Developed and deployed on IBM WebSphere Application Server,

Advanced Edition, and launched late last year, LiquidPrice.com saves shoppers time, energy and money. Instead of comparing prices at multiple Web sites and retail outlets, shoppers pick from a catalog of consumer electronics products and request bids for a product they like.

“WebSphere Application Server easily handled approximately eight million requests in ten hours—almost 800,000 per hour.”

—Prashant Gupta, Vice President of Engineering, LiquidPrice.com



LiquidPrice.com has hit upon a winning idea—where customers shop to their hearts' content while prices nosedive.

It's about business, not just technology.



At LiquidPrice.com customers can sit back as retailers woo them with competitive price bids.

“What impressed us most about WebSphere Application Server was its open architecture, scalability, transaction performance, speed of development and, not least, the technical support we got from IBM.”

–Prashant Gupta

Then they sit back as merchants bid competitively for their business. If they receive a bid that fits their budget, buyers save as much as 10 percent to 25 percent on what they would pay a retailer or discount supplier. Merchants pay LiquidPrice.com a service charge on every sale.

The company launched with its initial consumer electronics category and quickly plans to expand into other products and services. “Our vision is to be the premier online consumer marketplace for a wide variety of products and services,” says Chief Executive Officer Piyush Gupta. LiquidPrice.com’s business model is applicable to many other categories; therefore scalability is critical. “That’s one reason we turned to IBM and WebSphere Application Server,” says Prashant Gupta, vice president of engineering. “We view it as a long-term solution that will easily accommodate the company’s expected growth.”

Quick off the block

The first challenge, however, was to get to market quickly. WebSphere Application Server, Advanced Edition helped LiquidPrice.com condense its development cycle into a demanding two-month time frame. “We made good use of the productivity gains afforded by WebSphere Application Server, its Java™ support and ease of use,” says Prashant. “We cut our development time by two-thirds.”

Before selecting WebSphere Application Server, the company’s technology group evaluated the gamut of products — BEA, SilverStream, BroadVision and even some Enterprise JavaBeans™ (EJBs) tools from Theory Center. “What impressed us most about WebSphere Application Server,” says Prashant, “was its open architecture, scalability, transaction performance, speed of development and, not least, the technical support we got from IBM.”

Reliability was another driver. “Every second the site is not up and doing business, we lose money,” says Piyush. “A scalable, reliable site was foremost in our minds, so we bet on WebSphere Application Server.”

It proved to be a good bet. While the company developed its own catalog as well as auction and dealer processes, all the code was written within WebSphere Application Server. The site — as reliable as expected — runs on two Microsoft® Windows NT® servers, one Web server running WebSphere Application Server and the other a database server.

Increased revenues with zero additional overhead

Sellers are eager to participate, and LiquidPrice.com has already tripled its retailer network since its launch. “We were convinced of the viability of this business model when we found that our biggest question — whether retailers would want to play — simply was not an issue,” says Prashant. “Their reaction was that they compete every day, so why not on the Web.”

Because merchants’ identities are kept anonymous, they can sell without diluting their brands. “These are incremental sales without the \$50 to \$75 per-customer acquisition cost,” adds Piyush. “There are no marketing costs and low operational overheads, because the product only leaves the warehouse when it’s sold. There is absolutely no reason why a reputable dealer should not be selling through our site.”

And “reputable” is the operative word. Merchants must qualify to register with the site by undergoing a verification process, which may include onsite visits to ensure their credentials. Contracts designate that selling rights will be rescinded if LiquidPrice.com receives an abnormal number of complaints.

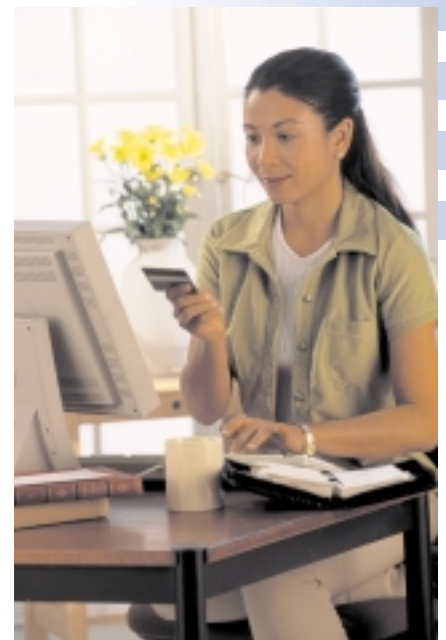
A painless new way to buy and save

In fact, everything about LiquidPrice.com says “satisfaction guaranteed.” Visitors to the site are greeted by a tongue-in-cheek, but appropriate, message — “Shop Till They Drop.” They being the merchants, of course. “Well, ‘they’ could be the prices,” quips Piyush. Buyers are protected by the merchants’ anonymity during the bidding, which prevents sellers from colluding to manipulate prices. There’s also a toll-free service center to help the company monitor complaints and ensure customer satisfaction.

Shoppers have flexible buying options. After two days — the length of time a Regular Bid is listed — or earlier if consumers find a bid they like, they can walk away with the lowest price. More eager buyers can submit a Flash Bid with a “reserve” price they are willing to pay. Flash Bids must be completed within six hours, and the purchase is pre-authorized should the buyers’ reserve price be met.

“Every second the site is not up and doing business, we lose money. A scalable, reliable site was foremost in our minds, so we bet on WebSphere Application Server.”

*—Piyush Gupta, Chief Executive Officer,
LiquidPrice.com*



*“Satisfaction guaranteed” is the motto at
LiquidPrice.com.*

Once the buyer accepts a bid, credit card information is provided to the merchant, who is charged a service commission. Today, LiquidPrice.com validates credit cards, ensuring security with 128-bit Secure Sockets Layer (SSL) encryption when taking information for merchants to process. However, in part because WebSphere Application Server includes a payment server, the company is considering taking on the task of payment processing as well. According to Prashant, the company will use IBM WebSphere Payment Manager (formerly IBM Payment Server™) for this.

LiquidPrice.com is also launching a publicity campaign to attract new business and increase its list of registered buyers. The electronics catalog is expected to include 4,000 products by the end of this year, and other product and service categories are in the planning stages. "Our name is not LiquidElectronics," notes Piyush. "We're in this to create a new business model—a new way to buy almost anything you need."

WebSphere Application Server—ready for anything

As that model unfolds, the Guptas foresee sales of 10,000 items per month later this year. For performance testing simulations, it was estimated that handling the longer term projection of 80,000 sales each month, based on a request conversion of two percent, would require handling 135,000 requests per day.

"We tested the technology to be sure the Web site would scale to this level of transaction volumes. To be safe, we targeted for one million requests within a 24-hour period," explains Prashant. "WebSphere Application Server easily handled approximately eight million requests in ten hours—almost 800,000 per hour."

With WebSphere Application Server, it will also be easy for LiquidPrice.com to integrate the IBM WebSphere Commerce Suite (formerly IBM Net.Commerce) Catalog Architect as well as customer profiling technologies, auctioning processes and other new features included in subsequent versions of the application server. "The initial development we did ourselves got us up and running quickly," explains Prashant. "For the long term, we wanted a solution that would accommodate new functionality without continuous recoding. We know we can rely on the comprehensive WebSphere Application Server architecture as we move forward."

He adds, "We are absolutely convinced that the roadmap IBM has for e-business is the right one. It's a forward-looking, integrated model, bolstered by excellent IBM support. From an e-business resource perspective, our shopping is done."

**For more information,
please contact your
IBM marketing representative or
IBM Business Partner.**

Visit us at:
www.ibm.com/e-business

For more information about
LiquidPrice.com, visit:
www.LiquidPrice.com



© Copyright IBM Corporation 2000

IBM Corporation
Software Group
Route 100
Somers, New York 10589

Produced in the United States of America
03-00
All Rights Reserved

The e-business logo, IBM, IBM Payment Server and WebSphere are trademarks of International Business Machines Corporation in the United States, other countries or both.

Microsoft and Windows NT are trademarks of Microsoft Corporation in the United States, other countries or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries or both.

Other company, product or service names may be trademarks or service marks of others.

This case study illustrates how one customer uses IBM products. Many factors have contributed to the results and benefits described. IBM does not guarantee comparable results. All information contained herein was provided by the featured customer. IBM does not attest to its accuracy.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.



Printed in the United States on recycled paper containing 10% recovered post-consumer fiber.



G325-6666-00