IBM

Dreyfus Brokerage's AS/400-based Web site sends its business on a bull run

When Dreyfus Brokerage Services, Inc. of Los Angeles, California, a member of the New York Stock Exchange, first thought of offering brokerage account services through the Internet, the company expected public interest, to be sure. What it didn't expect was an average of 600,000 to 700,000 hits a day to its Web site, which resides on an IBM AS/400 server. Capable of handling the Web site's heavy traffic, the AS/400 has enabled Dreyfus Brokerage to support a 30 percent increase in new brokerage accounts and an accompanying 35 percent improvement to its bottom line.

"Accounts are not remaining dormant," says Steven Wallace, chief executive officer of Dreyfus Brokerage. "We receive over 8,000 sales transactions per day. The power and capacity of the AS/400 business computing system, acting as a Web server, has easily enabled us to meet all our client's information and transactional needs."

Wallace and his staff reviewed most Web servers available in the marketplace and found that the AS/400, used in conjunction with software developed by I/NET, Inc., an IBM Business Partner, was the most powerful of all. "I/NET's server software, I/NET Commerce Server/400, works hand-in-hand with our homegrown application software," explains Bill Skidmore, vice president of data processing. "The server software keeps track of the communications side of online transactions. It doesn't matter

how effective in-house applications are if there is no reliable link to the outside world."
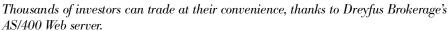
Ensuring efficient services
Established in 1976, Dreyfus Brokerage Services is a member of principal American exchanges. As a discount brokerage firm, it specializes in offering quality execution of orders and back-office services for clients. By continually reengineering and refining its processes to maximize ease of use and overall efficiency, Dreyfus Brokerage has been able to maintain one of the lowest commission structures in the securities industry, without compromising its high quality of service.

All authorized subscribers to Dreyfus Brokerage's online system are offered myriad

Application	Internet access Account services Online transactions
Business Benefits	30% increase in new brokerage accounts, 35% percent increase in revenue
Software	IBM® DB2® IBM OS/400® IBM DB2 Connect™
Hardware	IBM AS/400®

choices when they sign on to the company's Web site (*www.tradepbs.com*). Information

Thousands of investors can trade at their convenience, thanks to Dreyfus Brokerage's AS/400 Web server.

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options include market indices and statistics, market leaders, quotations, order entry, and account status showing security positions and money balances.

Customer account information is stored in multiple DB2 databases on the AS/400. While the primary customer file is stored in a single database, online transactions that come in against an account require that a minimum of four databases be accessed in order to process the request. Skidmore explains: "Name and address data is in one database; real money balances are housed in a second; security holdings are stored in a third; and the quote file is in a fourth. We have a multitude of other databases, each varying in size up to 50 gigabytes."

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Secure access to market data and customer information

The concept of providing direct Internet-based brokerage services to clients began when Wallace and his data processing team decided to use the AS/400 to allow clients to access key financial market information and to place orders electronically. "We had been involved in online trading for three years prior to implementing the AS/400," Skidmore says. "We already offered direct dial-in access, so providing a similar application over the Internet was a natural evolution for us. It provides an easy and economical way of delivering our specialized service to anyone in the world."

For Dreyfus Brokerage clients, online ordering takes only three to six seconds. When a request is made, the data is sent through a series of edit routines, in which the application software verifies the information and checks for typing errors before the request is picked up by the

server software. Once the edit routines are complete, the data is electronically transmitted to the point of execution—the New York Stock Exchange. It is then returned to display files in DB2 databases on the AS/400, where the requester is able to retrieve the execution of his or her order.

Receiving online ordering provides Dreyfus Brokerage with an additional source of information for customer service analysis. "The Internet provides access logs," explains Skidmore. "We automatically collect the addresses of site visitors. Later, if we wish, we can analyze usage to determine which services are of most interest or value to our clients."

Power, capacity, and flexibility: a competitive advantage

"Most Web servers consist of a personal computer with four gigabytes of storage and 32 megabytes of random access memory (RAM)," says Wallace. "The AS/400, on the other hand, has tremendous capacity, with 20 gigabytes of RAM and 996 gigabytes of storage." With close to 50 percent of its business transacted over the Internet, Dreyfus Brokerage recognizes that its Web site's performance is of critical concern. A second AS/400 has been installed as a mirror of the primary server. I/NET Commerce Server/400 utilizes IBM DB2 Connect[1] to facilitate record updating from one machine to another across the company's internal network. Skidmore joins Wallace in praise of the system's scalability: "There is a tremendous amount of scalability to the AS/400. We can add additional memory, RISC processors, and disk capacity. We haven't come close to its limits yet."

Compared with last year, daily visits to Dreyfus Brokerage's Web site have jumped more than 1600 percent, and this number is still growing dramatically. The effect on sales is equally compelling. "If you were to chart our volumes since we made trading available over the Internet, the line would go straight up—almost vertical," says Skidmore. With revenues of more than $60 million, the company obviously knows the secrets of using technology to gain a competitive advantage.

"IBM's AS/400 as a Web server and the Internet have turned out to be powerful business allies," says Wallace. "Thanks to this technology, Dreyfus Brokerage is setting records almost every day."

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