

## The Explosive Growth in Online Banking

### *How Community Banks Depend on the Internet to Serve Their Customers*

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Did you know that on an average day 64 million Americans go online? And that over three-quarters of households earning more than \$75,000 a year have Internet access?

The Internet delivers an exciting array of features, services and activities right into American households and businesses. Online banking is rapidly catching on in America. In fact, it is one of the fastest growing activities on the Web. A recent survey (conducted this fall by the nonprofit Pew Internet and American Life Project) estimates 37 million Americans now pay bills and transfer funds on the Web, more than twice the number that did so two years ago. Nearly one-third of Internet users say they use online banking services, compared with 17 percent in 2000.

#### **Who's Banking Online and Why?**

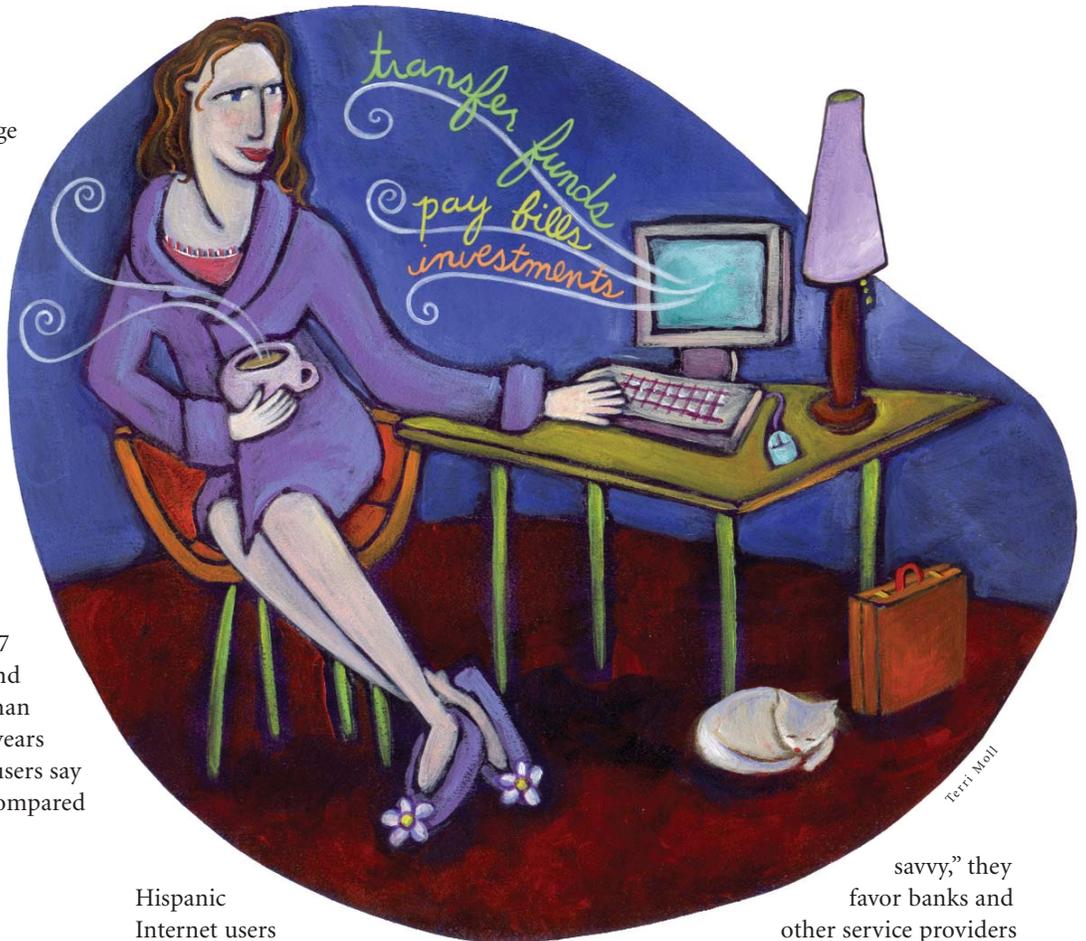
Young users are most likely to bank online, while those over 65 were the least likely, although older users are the most likely to track investments online or use the Internet to get stock quotes. College-educated and more affluent Internet users are more likely to handle their money online than poorer, less-educated Internet users. The Pew study finds that e-banking is equally popular with women and men, and reports that the percentages of African-American, white and

Hispanic Internet users who use online banking services are nearly equivalent.

Online banking is growing in popularity because consumers want it and use it. Bank customers benefit by skipping lines at teller windows and avoiding holding on the telephone for customer service representatives. They enjoy the convenience of 24-hour access to personal banking data at their fingertips. As Internet access increases and consumers become more "techno-

savvy," they favor banks and other service providers who enable them to conduct business on the Internet. This is especially true of younger consumers who are early adopters of new technology and who are passionate about saving time. Certainly, the popularity of online bill paying is one contributing factor to the growth in electronic payments and the continued decline in check usage.

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Terri Moll

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## The #1 Long-Term Technology Decision Facing Banks

Is online banking a hot topic at your bank? The Independent Community Bankers of America's 2002 Community Bank Technology Survey found that Internet banking is seen as the number one long-term technology decision challenging community banks.

Overall, 73 percent of 952 surveyed banks maintain a Web site on the Internet; and 74 percent of banks with Internet presence provide online banking services. The most popular online features offered nationally are:

Viewing account balance information	99%
Transferring funds between accounts	98%
Paying bills electronically	81%
Viewing statements	71%

## Ninth District Banks Jump on Internet Bandwagon

These national trends hold true in the Ninth District as well. In the September 2002 Fedgazette newsletter, Tobias Madden, regional economist for the Minneapolis Federal Reserve, reports that 42

Visitors to [www.melbybank.com](http://www.melbybank.com) can take a virtual tour of the site's online banking service and learn about its capabilities.

percent of Ninth District banks offered a public Web site as of first quarter 2002. This represented a 16 percent increase over 2001. In addition, 68 percent of the Web sites provided sophisticated online transaction capability, compared to 54 percent the previous year. In addition to online transactions, over half of Ninth

District Web sites include a privacy policy statement, e-mail contact information, a loan calculator and community links (to the chamber of commerce or local news sources, for instance).

## Case Studies: How Two Regional Banks Launched Online Banking

Two District financial institutions share how they employ e-banking to enhance long-term customer relationships, provide online services desired by customers and enjoy cost savings.

John O. Melby & Co. Bank, a \$40 million financial institution in Whitehall, Wisconsin, started its Internet site slowly. Through the use of competitive advertising, online traffic has steadily increased and new customers are encouraged to come aboard.

Vice president David Witt says his customers have adapted well to Internet banking. "Sometimes, they wonder how they got along without it!" says Witt. Providing superior customer service is key to customer acceptance of e-banking. Witt explains that customers sometimes manage to forget or lose their passwords and are eager to have these problems resolved. "They want to use our online solution and recovering the password quickly is very important."



First National invested in a highly visible, custom-painted automobile called the "Bug." According to president Kenneth Heiser, the "Catch the Bug" campaign has been a hit in promoting online banking.

**First National Bank**  
of Hudson, WI USA

Apply online now!  
click here

JAN 6, 2003 | START | BANK | MONEY | SHOPPING | COMMUNITY | PREFERENCES

LOG-IN | SIGN UP

Welcome!  
YOU ARE HERE ▶ Bank > Access My Accounts

Home Banking | Bill Payment

account listing | view schedule

Accounts | Select an account first

E-mail | Help | Exit

First National Bank 307 Second Street Hudson WI 54016 · (715) 386-5511

Hello JOHN Q PUBLIC!

Account	Balance	Status	Activities
CHECKING	238.51		View current transactions
SAVINGS	18.52		View current transactions Transfer funds from this account View statement and notice inbox View range of transactions View account information View list of stop payments
HELOC	37.62		

**Account Summary Information**  
2 Deposit accounts with a total balance of 257.03  
1 Loan accounts with a total balance of 37.62

You last accessed your account on Jan 06, 2003 10:20:41  
You have visited 40 times since Nov 22, 2002 15:24:41

Customers can view account information and transfer funds via [www.thefirstnationalbank.com](http://www.thefirstnationalbank.com)

Another successful e-banking story features the First National Bank of Hudson in Hudson, Wisconsin, a large community bank with assets exceeding \$300 million. In 1998, when First National was serving its customers via several branches and telephone banking, bank president Kenneth Heiser decided he wanted his bank to be the first institution in Hudson to offer Internet banking. First National researched the potential of online banking and began a six-month project to introduce Internet banking to its customers. The initial menu of products and services included online balance lookups, real-time transfers and account histories. This has grown to include downloadable statements, electronic loan payments, check imaging and online bill payment.

According to Heiser, First National did not institute Internet banking to replace bank staff or discourage customers from entering the bank. In fact, they employ a receptionist instead of a voice recording

to handle incoming calls. First National realizes cost savings from Internet banking not by reducing staff or services, but through reduced transactional costs and operational efficiencies.

### Best Practices Advice

To guarantee the success of an online banking venture, projecting a consistent, positive message is key. Susan Gilbert, executive vice president, and Heiser agree that in-depth training of front-line staff is crucial in securing the success of Internet banking. The enthusiasm shown by tellers and personal bankers in communicating features and benefits of online banking gives customers confidence to try the Internet. They also suggest hiring an in-house technology expert. This employee demonstrates the convenience and ease of Internet banking to existing and potential customers.

Heiser advises institutions not to wait for an ultimate banking solution, but to dive right in. Online banking is an ini-

tiative that positions a bank strategically to serve the next generation of customers who embrace new technology.

### A Supplement, Not a Substitute

Online banking should be viewed as a supplemental tool to attract and retain customers, not as a substitute for traditional banking services. E-banking is not a means to shutter branches and reduce costs. Wise bankers realize that customers still value “face time” and personal interaction with their bank. The goal of a successful online banking program should be to develop long-term lasting partnerships with customers, rather than purely transactional or product-based partnerships that may be short-lived. A well-executed online banking venture can make your bank part of your customers’ lifestyles and provide a powerful platform from which to market new banking services to your best customers.

## Where to Learn More About Online Banking

- Independent Community Bankers of America at [www.icba.org](http://www.icba.org)  
2002 Community Bank Technology Survey Results
- Pew Internet and American Life Project at [Pewinternet.org](http://Pewinternet.org)  
Pew Internet Project Data Memo, November 2002
- Federal Reserve Bank of Minneapolis *Fedgazette*, September 2002  
“Bank Web Sites Address Privacy Concerns – Customers’ and Their Own,” page 19.

# Customer Self-Service: The Answer to Savings and Customer

e-Business Strategy Office  
Federal Reserve Bank of Richmond  
Richmond, VA

The notion of using technology to facilitate customer self-service has been employed for many years. For example, in the early 1900s as telephone usage grew, it became clear that the supply of telephone switchboard operators needed to setup calls could not keep up with demand. Technology was applied to the problem and the job of initiating and completing calls was shifted to end users through the use of dial and touch-tone phones. In essence, customer self-service in placing phone calls was born.

The Web, the Internet and related technologies provide an excellent medium for realizing broad-scale customer self-service because they allow interactive, self-directed and, in some cases, anonymous service. However, the elementary questions remain: "What is customer self-service?" and "Can it be useful in realizing cost efficiencies and improving customer relationships?"

## What is Customer Self-Service?

Simplistically, customer self-service is



Even with sophisticated self-service options available, call centers continue to provide critical one-on-one support.

providing the customer with the tools necessary to perform tasks that previously required the assistance of a customer service representative. Customer self-service can be implemented through any number of communication channels including e-mail, fax, voice response systems and a sundry of new Web technologies.

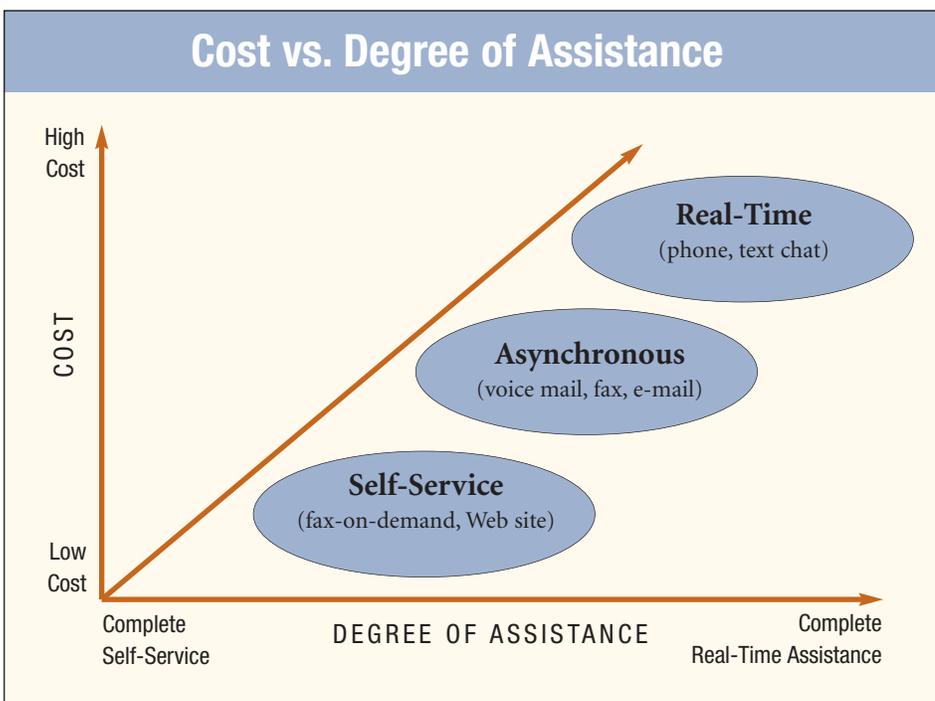
## Why Offer Customer Self-Service?

Why should a company offer customer self-service options to its customers? The traditional answer is that it is a more cost-effective method of satisfying a customer's needs. The benefits for customer self-service can easily be quantified in this regard. The non-traditional answer is that it provides a richer, more satisfying experience for customers, as they control the interaction. These are intangible benefits that are harder to quantify and do not lend themselves to cost-benefit analysis.

Newer Web technologies are a big piece of the self-service puzzle and enhance efforts to provide a richer experience with a wide range of customer support options. These options range from preemptively assisting customers via online guidance to reactively assisting them when they have questions (with tools such as online help, FAQs and knowledge databases (KBs). When they experience complex difficulties, real-time or near real-time support is provided via telephone or e-mail.

## Home Banking

There are several excellent, yet practical, industry implementations of customer self-service in use today. For example,



# Satisfaction?

many home-banking systems provide customers the ability to self-enroll in many services, choose their own user identifications, and set or reset passwords. Many home-banking systems also provide rich KBs or repositories of FAQs to help the first-time or infrequent customer navigate through various processes. Many back up their KBs and FAQs with the option to e-mail a customer service representative, request a call, or engage in an online chat with a service representative.

## The Cost Perspective

Permitting the customer to perform tasks previously performed by customer service representatives is intuitively less expensive. In the multi-tiered customer support model, each successive tier is typically more expensive than the previous. For example, Tier 1 support typically costs \$1 per use, while Tier 2 costs \$10 per use on average, and Tier 3 costs approximately \$40 per use. Tier 2 and Tier 3 are more expensive due to the ratio of customer support representatives that must be available. In Tier 2 one customer support representative can typically service many customers at one time, whereas in Tier 3 the interaction is usually one-on-one.

An appropriate strategy is to endeavor to satisfy the customer's needs with the least expensive form of support most of the time, yet provide the fullest range of options needed to completely satisfy customer needs.

## Keys to Success

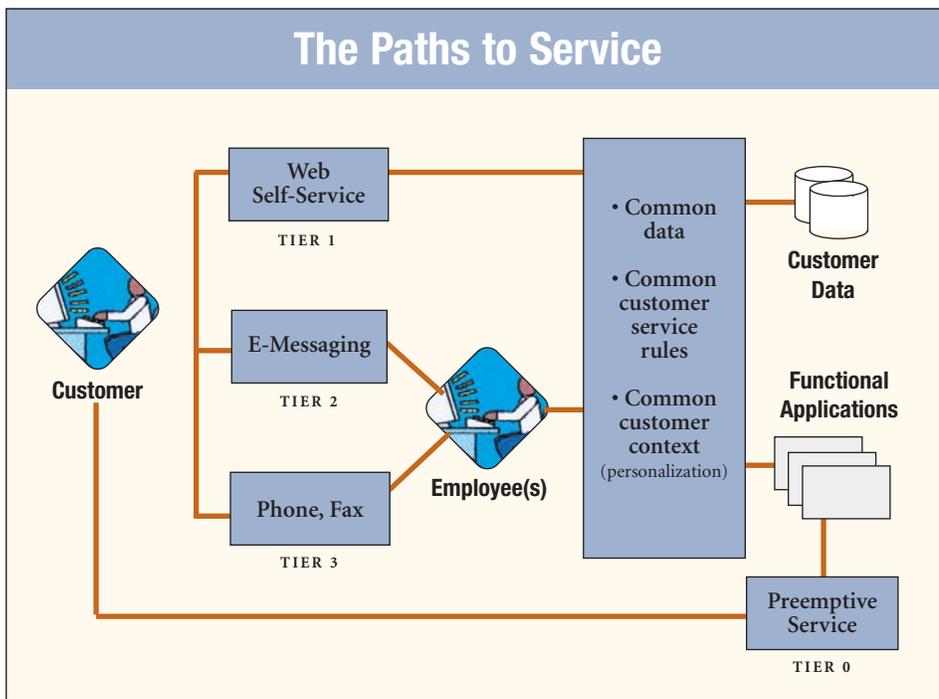
There are several keys to success in providing customer self-service. Most important, the service must be as good as or better than working with a customer service representative. This is attainable by making the service more consistent and richer than is possible with call center staff by creating a feeling of control and predictability for the customer. To best achieve this, customer data should be fully integrated in all self-service applications, support systems and back-end processing systems. When customers have a problem and cannot find an answer, they could then be channeled to e-mail or online chat with a customer service representative, which may result in a one-on-one phone call to the customer support call center. 📞

## Power to the People

In her article, *Customer Self-Service: Power to the People*, CIO Magazine, July 19, 2001, Louise Fickel provides the following tips for developing self-service options:

- Learn everything about your customers.
- Conduct focus groups to ensure that they want self-service.
- Define clear business goals.
- Evaluate the technology for its technical and financial merits. Does it match your customer base? Will it boost profitability?
- Work as a team. Have customer support, IT and other departments involved every step of the way.
- Offer training to employees.
- Expect this to be an iterative process that requires making changes as you learn more about your customers.
- Develop an effective way to measure results.
- Under-promise and over-deliver.

## The Paths to Service



## Your Account Manager Can Help

### IN MINNEAPOLIS

Leigh Bohn, *Director of Sales*

Rama Ramaswamy, *Senior Account Manager*

Marilyn Coleman, *Account Manager*

Nancy Nordlund, *Associate Account Manager*

Bill Hubbard, *Sales Support Representative*

Jay Nelson, *Sales Support Representative*

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Julie Munson, *Lead Customer Service Representative*

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# Securing the Internet

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The language or “rule set” guiding communications on the Internet or Web is called Internet Protocol (IP). In fact, IP drives the vast majority of large private networks as well as the Internet. IP is flexible, powerful and has served networking requirements for decades. However, the use of large IP networks (including the Internet) for sensitive communications is limited by its security weaknesses.

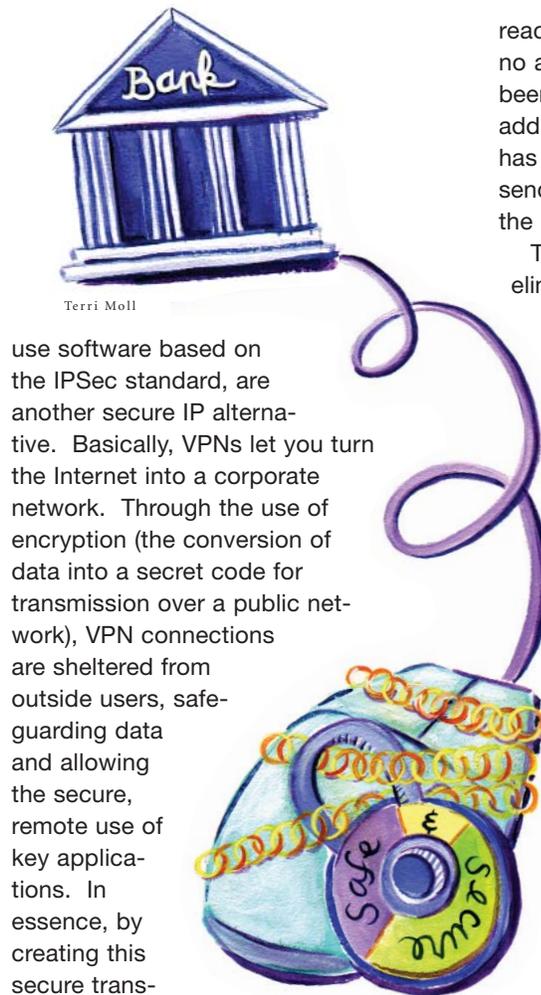
In general, when using the Internet for communication or transfer of information, plain text data is vulnerable to eavesdropping. To provide a safe environment or “secure IP,” additional communications or security protocols, which encrypt and decrypt messages for online transmissions, are needed. In general, these security protocols can also offer authentication, which means they can provide a method to verify the identity of a user who is logging onto a computer system. Two security protocols have emerged on the Web: Secure Sockets Layer (SSL) by Netscape® and the Internet Engineering Task Force’s IPsec.

## SSL: A Mainstay of E-commerce

The SSL standard is not a single protocol, but rather a set of accepted data transfer routines that are designed to protect the integrity of transmitted messages. Originally developed by Netscape as a way of ensuring the security of e-commerce transactions, SSL is a relatively low-cost Internet security solution. Browser-based SSL requires little or no software on remote PCs; in most cases, any PC with a browser can be used to make a secure connection. However, a primary weakness of SSL is that it doesn’t truly identify or authenticate the person initiating a transaction or communication.

## Virtual Private Networks: A Step Above?

Virtual private networks (VPNs), which



use software based on the IPsec standard, are another secure IP alternative. Basically, VPNs let you turn the Internet into a corporate network. Through the use of encryption (the conversion of data into a secret code for transmission over a public network), VPN connections are sheltered from outside users, safeguarding data and allowing the secure, remote use of key applications. In essence, by creating this secure transmission channel, a corporation can turn the “untrusted” Internet into a “trusted” extension of a protected internal network to ensure secure communication with remote vendors, customers or staff. The main problem with conventional VPNs is that each vendor’s system requires the use of its own software on user PCs, which leads to higher costs and installation concerns. Compatibility with other systems can also be a problem.

## IPsec: A Foundation of VPNs

IPsec technology is based on contemporary cryptographic tools, which allow it to deliver strong data authentication and privacy assurances. Think of a postcard delivered through regular mail. Let’s assume the message on this postcard is written in pencil and is not signed by the sender. As the postcard travels the mail system, the message is in plain sight for anyone to see. When it

reaches its destination, the receiver has no assurance that the message has not been read or changed by anyone else. In addition, without a signature, the receiver has no real assurance that the apparent sender is the person who actually wrote the message and sent the card.

This describes a typical message traveling the Internet. However, it is possible to create a virtual “envelope” for a message using encryption to scramble it. Only the intended receiver would have the “key” that would decrypt or unscramble the message. IPsec can scramble a message so that it remains private as it travels the Internet and can also verify data integrity and authenticity.

In summary, IPsec protocols, or rules, provide the three features needed for secure communications over large public networks like the Internet: authentication, integrity and confidentiality. The result is that with IPsec-compliant products, you can build a secure VPN in any existing IP-based network. This provides for more a flexible and robust security solution than SSL, although at a higher cost.

As the banking industry and its related payment systems rely more and more on the public Internet and large networks to provide services, the ability to truly authenticate users and to safeguard the integrity and confidentiality of customer information will demand the use of stronger secure IP systems. SSL and IPsec are two of the current solutions available and can be used based on the degree of authentication and privacy needed.

## Sources

- “IPsec (IP Security), Alcatel Executive Briefing,” *Alcatel Internetworking*, January 2002.
- “Network World VPN Newsletter,” June 26, 2002.
- “SSL Catching up to VPN in Popularity,” *Network World*, February 18, 2002.
- “Ensuring End-to-End Security with SSL,” *Network World Tech Update*, May 15, 2000.

# Put FedLine® for the Web to Work for Your Business

You may have had Web access in your office for awhile now, but wouldn't you like to increase your use of the Internet to benefit your business? The Federal Reserve would like to help you leverage the Web to bring even greater efficiency to your workplace. FedLine® for the Web is the new tool that provides rapid, flexible and powerful Web-based access to Federal Reserve Financial Services. It uses the power of the Internet to provide any or all of your staff with convenient same-time access; you control and customize usage to meet your business needs.

FedLine for the Web saves you time by integrating much of your current and historical business information in one convenient place. Many valuable services are available today, and more are coming soon. Today, FedLine for the Web provides access to accounting and billing information, cash services, savings bonds services, National Settlement Service agent inquiry, FedACH<sup>SM</sup> information, and check services. While you may have access to these services via other channels, you'll appreciate FedLine for the Web's expanded functionality, including options to customize reporting and security settings to support your unique environment.

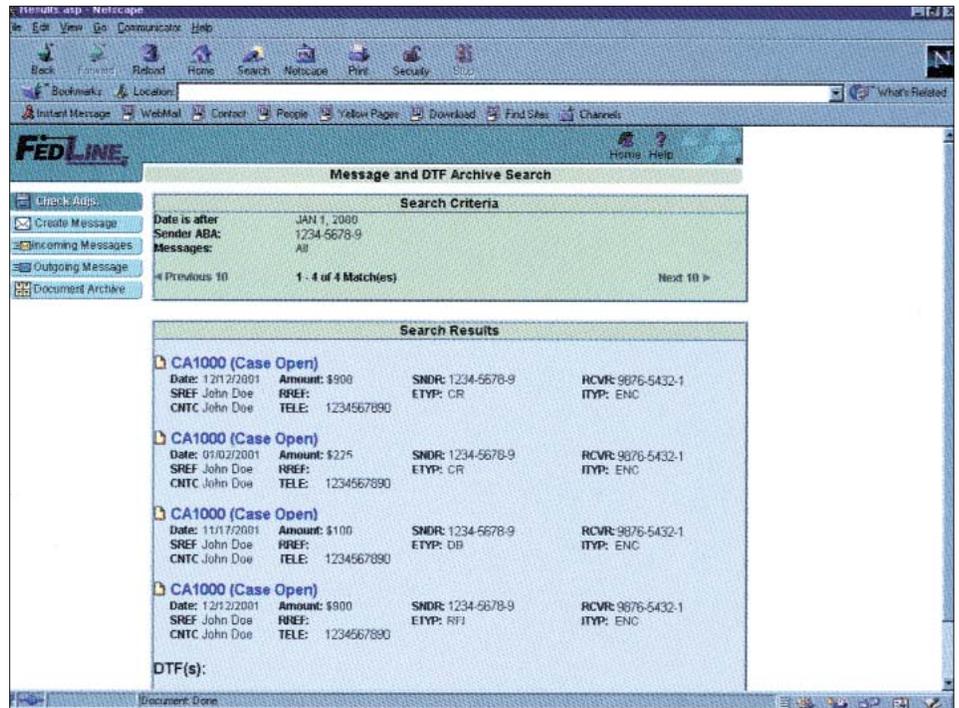
Read on to learn more about how just one FedLine for the Web application can help address your business challenges and improve your bottom line. If, after learning more about Check Services on the Web, you'd like to explore the features and benefits of the other applications, visit [www.frbservices.org](http://www.frbservices.org) or contact your account manager at 1-800-553-9656 ext. 6933 in Minneapolis or 1-800-823-4333 ext. 3877 in Helena. Let FedLine for the Web put the power of the Web to work for you.

## Online Check Services Application Creates Operational Efficiency

Looking for ways to handle your check operation functions more efficiently? FedLine for the Web harnesses the power and speed of the Internet to affordably deliver same-time access to Federal Reserve Check Services. A full suite of Check Services is accessible on the Web and many enhancements are on the horizon.

## Rapid Access to Check Adjustment Cases

Our FedLine for the Web Check Adjustments application provides you with



Check Adjustments via FedLine for the Web offers you access to a 12-month archive of all your advices, messages, acknowledgements and DTFs. The screen above illustrates a list resulting from a typical document archive search.

information and timeliness not possible in a paper environment or even with DOS-based FedLine! Not only will you benefit from immediate entry and receive same-day entry or acknowledgment, you can also easily create, view, print, download and research your adjustment cases online, reducing the burden of paper forms and telephone inquiries.

A new addition to our Check Adjustments application is our documents-to-follow (DTF) archive, which expedites case resolution and provides easy access to electronic copies of DTFs. If you indicate that an adjustment case requires supporting documentation when you enter the case into FedLine for the Web, the application will automatically generate a cover sheet for your DTFs. You then submit the DTFs for processing and entry into the archive by faxing the cover sheet and DTFs to a toll-free number. Your documentation is automatically matched with the corresponding adjustment message in the electronic archive and is accessible online for 12 months. You will receive adjustment messages, with associated DTFs attached, via your FedLine for the Web inbox.

## Deposit Information in One Place

Track the check deposit services you request from us in one location via your Web browser. FedLine for the Web users have access to five business days of transactions and receive immediate acknowledgment when we receive a file or request.

If you send checks directly to other Federal Reserve offices, you can upload this information using an intuitive data entry feature or by importing a formatted file from your host system. You may also send information on fine sort deposits by entering the data online or importing a formatted file.

## Fine-Tune Your Cash Position

If you deposit with or receive checks from us, you can view the Availability of Advices Delivery List online and select the check advice you wish to display or print. Immediate notification of credits and debits allows you to more effectively manage your cash position by avoiding overdrafts and investing excess funds.

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# Put FedLine® for the Web to Work for Your Business

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## Enhanced Payor Bank Capabilities

To further assist you with cash management efforts and demand deposit account postings, our online Electronic Check Presentment services allow you to download your MICR and account total files. If you truncate your checks with us or use our MICR Presentment Plus service, you can also derive requests for return or retrieval of an item from the MICR file to save time and increase your processing accuracy. FedLine for the Web supports customized reporting and security settings to support your unique environment; for instance, you can allow your service provider or correspondent to access your files.

## Faster Check Image Retrievals for You and Your Customers

In 2002, we rolled out a new image service that offers value-added solutions: FedImage<sup>SM</sup> Services. Capitalizing on the latest in check processing technology, FedImage Services offers innovative features and functionality. You and your retail and corporate customers will be able to receive image files and access images via the Internet. FedLine for the Web customers will enjoy faster retrieval of check images, remote access to images and flexible delivery through e-mail, fax, CD-ROM or tape.

## Online LDRIN

With FedLine for the Web's new large dollar return item notification (LDRIN) service, you have the ability to create and receive online notifications for return items valued at \$2,500



FedLine for the Web delivers the convenience of desktop access to service information, including check adjustments, MICR files, check images, check deposits and large-dollar returns.

or more. Message history is stored for five business days, and you can print notifications to create an audit trail for your files.

## Same-Time Access by Multiple Users

Because FedLine for the Web is available via most Internet-connected PCs, staff with different responsibilities can perform their functions simultaneously. Gaining operational efficiencies is affordable since you pay only a nominal fee for each additional subscriber. With FedLine for the Web, you can grant access to each item-processing employee who needs it. You control and customize access to meet your business needs. New FedLine for the Web users get

up to speed quickly because the point-and-click Web technology is easy to learn.

## To Learn More

Visit [www.frbsservices.org](http://www.frbsservices.org) today to view online demos of FedLine for the Web and learn about available services, sign-up procedures and associated fees. As always, your account manager is also available to assist you and can help you determine how FedLine for the Web can serve your specific needs. Contact your account manager at 1-800-553-9656 ext. 6933 in Minneapolis or 1-800-823-4333 ext. 3877 in Helena. 

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