Paragon Direct

Fast, Efficient Mailing List Processing With *3770Link*

Highlights

3770Link offers full-featured 3770 SNA/RJE terminal emulation in a wide range of computing environments. One version of 3770Link operates as a client to Microsoft SNA Server; a second version can provide the functionality of a 3770 terminal in a standalone Windows 95 or Windows NT environment. 3770Link features a modern graphical user interface with intuitive menus for easy, efficient interactive operations. A powerful script language supports automated, unattended sessions. The SNA Server version of 3770Link is approved to carry the "Designed for Microsoft BackOffice" logo.

"3770Link is indispensable to our business. It allows us to work quickly and efficiently to serve our customers' needs—and it vastly streamlines our ability to move vital information back and forth between the mainframe and our PC network. Serengeti is a superb partner who is more than willing to work with us on making 3770Link the best possible solution for this environment."

**Jim Tyler
Paragon Direct**

Comprehensive Computer Services for Catalog Publishers

These days, catalog sales can account for a major portion of a company's revenue, with consumers and businesses alike ordering everything from clothing to medical supplies, books to weather gear, backyard furniture to office equipment through the mail. As today's savvy catalog publishers know, capturing these sales calls for more than just attractive product layouts and appealing descriptions. Maximizing a catalog's pay-off requires mailing lists that are complete, correct, and up to date—and with these lists often containing thousands or even millions of names and addresses, that can be a tall order.

That's why more than 100 business-to-business and consumer catalogers nationwide count on Milwaukee-based Paragon Direct for programming and processing services that make mailing lists more effective. After receiving a client's current list on tape or diskette, Paragon performs "address hygiene," which involves correcting zip codes, updating addresses, and eliminating duplicates. Special "mailstream" software is used to qualify massive mailings for bulk discounts; key codes are added; and addresses are readied for ink jet printing. In addition to these more or less standard routines, Paragon performs custom programming to meet clients' specific needs. A mailing list might, for example, be divided into mailings to occur over five months, requiring a program for dividing the files, assigning unique key codes, and so on.

All job processing occurs on Paragon's IBM mainframe, using execution statements in the job control language (JCL) common in mainframe shops. Microsoft SNA Server controls communication between the firm's PC network and the mainframe. And, so that programmers can edit the JCL statements on their PCs, then submit the JCL for processing on the mainframe, Paragon uses the powerful 3770Link terminal emulation product from Serengeti Systems.

"In addition to transmitting JCL from the PC platform to the mainframe for execution," says Jim Tyler, director of Technical Services at Paragon, "we

Fast, Efficient Mailing List Processing
with *3770Link* & Paragon Direct

also rely on 3770Link for the opposite. Output from the mainframe is downloaded to PCs in the form of reports that can be brought into Microsoft Word for touch-up, faxed or emailed to the client, printed out to be viewed internally, or whatever.

"Because of 3770Link," Tyler says, "we can use the better editors available on the PCs to make JCL editing easier and more efficient. Plus, people have more CPU cycles available on their own PCs and can work much faster there than on the mainframe. By supporting reliable SNA remote job entry (RJE), file transfer, and more, 3770Link improves our operations considerably."

Reliable, User-Transparent Operation: Saving Time, Cutting Overhead

In implementing 3770Link, one of Paragon's key goals was to make the JCL and output report file transmissions as transparent to users as possible. A related objective was to have 3770Link operating as "a server-type product," recalls Tyler, "without the overhead involved in every user's desktop running the client-side 3770Link application. We wanted to eliminate the need for interactive operation and automate the entire spectrum of 3770Link tasks."

In response to this need, Serengeti enhanced the 3770Link product by adding a "hot reader" function, which enabled Paragon to develop a process whereby the JCL files are placed in a special directory, then automatically

"picked up" by 3770Link and sent to the mainframe. A 3770Link script instructs the product to check the directory every few seconds and transmit any files that may be there. For the output report files, other scripts instruct 3770Link to get the files from the mainframe and download them to the PC.

"This automated operation not only saves time and CPU resources," says Tyler, "but it eliminates the need to train users in 3770Link interactive operations. 3770Link vastly simplifies and streamlines users' work, yet they don't even see the product."

A Powerful, Easy-to-Use Script Language

Tyler was able to write just four 3770Link scripts to automate all the tasks needed by the Paragon operation, with each script initiating a logical unit (LU) session that is key to the process. One LU moves the JCL to the mainframe; a second retrieves output from the mainframe list queue; a third gets output from the mainframe punch queue; and the fourth prints output on a printer attached to the PC.

"In the old days," Tyler says, "it would have taken four terminals to accomplish what 3770Link lets us do with a single PC. What's more, the scripting language is very rich and full-featured. There is complete reference information for each command. And using the language is so easy that it just took me a few minutes to write all the scripts we needed."

A Dependable Partnership With Serengeti

"Serengeti's willingness to work with me was the most valuable aspect of adopting 3770Link," says Tyler, whose organization beta tested early versions of the product. "I was able to provide enhancement requests, and Serengeti would respond quickly and effectively to meet our needs. Serengeti was totally responsive in making sure everything worked the way we needed it to.

"We look forward to a continuing strong relationship with Serengeti," says Tyler. "3770Link will, for example, be very instrumental in assisting us with an eventual transition of the application development from the mainframe to the PC."

About Serengeti Systems

Serengeti Systems is the recognized leader in Binary Synchronous Communications (BSC) technology and Remote Job Entry (RJE) PC-to-mainframe connectivity. The company has developed PC-to-legacy systems integration products for Windows 3.x, Windows 95, Windows NT, OS/2, MS-DOS, UNIX and AIX systems since 1986.

Give Serengeti a call, and find out why customers like Paragon Direct choose Serengeti as their communications provider. For more information about Paragon's powerful mailing list processing services for the direct marketing industry, call 414/362-1111.

3770Link
SNA Server Version

Designed for
Microsoft®
BackOffice™

Serengeti Systems

512/345-2211

www.serengeti.com

PlanOrg IT Services GmbH

Bank "Data Stations" Featuring *3770Link* and Microsoft SNA Server

Highlights

3770Link, from Serengeti Systems, offers full-featured 3770 SNA/RJE terminal emulation in the Windows computing environments. 3770Link operates as a client to Microsoft SNA Server, IBM Communications Server, or Novell Netware for SAA; a second version emulates a 3770 terminal in a standalone Windows 95/98 or Windows NT environment. 3770Link features a modern graphical user interface with intuitive menus for efficient interactive operations. A powerful script language supports unattended sessions. The Microsoft SNA Server version of 3770Link is approved to carry the "Designed for Microsoft BackOffice" logo.

"Serengeti's 3770Link product has enabled us to dramatically enhance the crucial data processing function for SIS West and the banking organizations it serves—while preserving these clients' huge investments in legacy systems. And because of 3770Link's open, flexible architecture, we were able to easily create our own user interface specific for the banking environment. We consider 3770Link to be the best product of its kind in the market today."

**Bernhard Schmitz
Technology Manager
PlanOrg IT Services GmbH**

High-Speed Printing Services for German Financial Institutions

There are few industries more in need of fast, fail-safe data processing capabilities than the financial services sector. To achieve these capabilities, many banks rely on centralized data processing centers, where millions of daily transactions from a wide range of bank clients are processed quickly and efficiently. In the Rhine and Pfalz regions of Germany, 86 banks—each having a yearly balance of one to 30 billion DM and up to 200 individual outlets—are linked to one such center, SIS West in Cologne.

Like many organizations worldwide, SIS West found itself, in 1997, needing to replace a large number of near-obsolete IBM 3770 terminal emulation systems, many so old that they could no longer be effectively serviced. And like a host of other financial services institutions in the region, the center turned for help to PlanOrg IT Services headquartered in Cologne. A division of PlanOrg Plc., PlanOrg IT provides

comprehensive support to a wide range of financial clients; the 90-employee firm has sold, installed and maintained more than 20,000 PC systems in the last five years alone.

Finding the right 3770 emulation solution: 3770Link

When SIS West contracted with PlanOrg in September, 1997, the IT services provider analyzed SIS West's complex processing environment, at the core of which are IBM and Comparex mainframes with a combined processing power of 3,044 MIPS, a disk capacity of 6.8 terabytes, and about 60,000 online LUs.

"The only viable option for this project was a PC-based communications software solution running on Windows NT," recalls Bernhard Schmitz, a senior technology manager at PlanOrg. "That way, we could replace the 3770 hardware with PCs, and we could use the existing host connections without having to generate new ones—thereby leveraging our client's enormous investment in its computing systems.

"The only problem," Schmitz continues, "was that none of the well-known German software vendors offered the kind of software-based emulation solution this required." PlanOrg

Bank "Data Stations" Featuring *3770Link* and Microsoft SNA Server

broadened its search to the Internet—where it found just the product to meet the project's needs: 3770Link, from Serengeti Systems.

Not only did the 3770Link product information look promising, but PlanOrg was able to easily download a trial version and create test scenarios. "In only a couple of days, it was clear that with a few minor enhancements, 3770Link could be very successful within the banking environments of the Rhineland," says Schmitz.

A Productive, Ultra-efficient Relationship With Serengeti

In February, 1998, PlanOrg gave Serengeti an outline of the changes that would need to be made to 3770Link, and Serengeti agreed to make these enhancements within a month.

"Serengeti came through for us 100 percent," says Schmitz. "For example, the revised version enabled us to utilize printer specific character sets and to meet SIS West's specific printer formatting requirements."

Once Serengeti had delivered the new version as agreed, PlanOrg was able to install PC systems and 3770Link within one of the bank client's environments, and to run a quasi-live test of the solution. The results, as expected, were very positive—and any additional changes that were needed, says Schmitz, were "usually implemented by Serengeti's development team and delivered overnight via the Internet. Seldom have we dealt with a software vendor as fast and responsive as Serengeti was in this situation."

A Custom-Tailored GUI for the 3770Link "Data Station"

Before the new 3770Link solution could be widely installed, PlanOrg needed to replace 3770Link's built-in menu-driven interactive interface with a custom GUI tailored to the specific needs of the banking institutions. The GUI phase of the project got underway in April, 1998, aided largely by 3770Link's powerful application integration capabilities. Thanks to these capabilities—which enable developers to integrate mainframe connectivity into custom applications—the PlanOrg developers easily incorporated RJE functionality by producing GUI features for submitting job instructions, visualizing the console, entering RJE commands, controlling the printer, and more.

The result? A successful project completion by September, 1998, followed by the installation of new PlanOrg-designed "Data Stations" at 25 of the client banks. A Data Station consists of two connected PCs: a Windows NT server running Microsoft SNA Server for the host connectivity, paired with a Windows NT Workstation.

"3770Link and the GUI we developed work together seamlessly," says Schmitz. "Every Data Station sends about 200 JCL jobs to the host and prints up to 6,000 12-inch pages a day. The project has been a huge success, one we owe to Serengeti Systems who made a crucial commitment to us, and to the Serengeti developers, who helped us shape 3770Link into the precise solution that was needed."

About Serengeti Systems

Serengeti Systems is the recognized leader in Remote Job Entry (RJE) PC-to-mainframe connectivity. The company has developed PC-to-legacy systems integration products for Windows 3.x, Windows 95/98, Windows NT, OS/2, MS-DOS, UNIX and AIX systems since 1986.

Give Serengeti a call, and find out why customers like PlanOrg IT Services choose Serengeti as their communications provider. For more information about PlanOrg's comprehensive services in Germany, call +49 221 96855 0, or visit them at www.planorg.de.

Serengeti Systems

512/345-2211

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3770Link
SNA Server Version

Designed for
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SunGard Trust Systems, Inc.

A Vital Application for Banks, Featuring *3780Link*

Highlights

3780Link combines full-featured IBM 3780/2780 terminal emulation and RJE communications with a modern graphical user interface. Intuitive menus allow for easy, efficient interactive operations, and a powerful script language supports automated, unattended sessions. Available on all of today's widely used platforms, 3780Link is easy to configure with simple input screens.

"Serengeti's 3780Link is a huge contributing factor to our success. Our 500 bank customers rely on us to communicate with them twice every night, while they're at home. 3780Link is directly responsible for our ability to provide this hands-off automated operation; without it, our product wouldn't be what it is."

Fred Newton
VP of Systems
SunGard Trust

Automated Remote Processing of Trust Account Data

For the typical bank, monitoring the value of trust accounts is a key operation—and a complex one at that. The average account is invested in a variety of stocks, bonds, and other securities, with values that fluctuate with the daily whims of the market. What's more, a single stock holding can be spread across ten or fifteen different accounts. When you're managing hundreds of these accounts, that's a lot of data to process and track on a daily basis—yet when a customer calls to check on a balance, your business depends on being able to respond. On the spot, and on the money.

That's why more than 500 small to mid-sized banking institutions throughout the U.S., managing

hundreds of trust accounts each, turn to SunGard Trust Systems, Inc. These banks rely on SunGard for the daily information that enables them to monitor trust values precisely, efficiently, and with ease. Bank employees post buy/sell transactions, income map redistributions, and other trust data using SunGard's trust accounting software product, which is installed at all SunGard customer sites. Then, each night, a mainframe at the Charlotte, North Carolina-based

SunGard Data Center places calls into the customer sites, extracts input transactions, and interfaces this data against market pricing information to calculate account values. The updates are sent back to the customer sites and are available during the next day's business hours for checking account status and running inquiry reports. In addition, SunGard's Portfolio Account Link (PAL) add-on product enables SunGard customers to provide their own customers with 24-hour online access to account data via the world wide web; many of SunGard's clients are snapping up this Internet option.

The beauty of the SunGard system is that it offers hands-off automated operation—rock solid mainframe account processing that occurs while the bankers and their employees are out of the office or even at home asleep. "This is crucial for our customers," says Fred Newton, vice president of Systems Support at SunGard Trust, a 180-employee wholly-owned subsidiary of SunGard Data Systems. "Without an extremely powerful, reliable communications mechanism, there is no way we could make it happen."

3780Link™

3780/2780 RJE Emulation

A Vital Application for Banks, Featuring *3780Link* & SunGard Trust Systems, Inc.

Which is why, since 1990, SunGard has used Serengeti Systems' 3780Link as a cornerstone of its trust accounting solution. "3780Link gives us everything we need to fully facilitate the unattended sessions," says Newton. "Its state-of-the-art scripting language, robust error detection and correction capabilities, and overall reliability make 3780Link indispensable—for us and for our customers."

3780Link Scripts: A Foundation for Unattended Operation

Since the SunGard mainframe automatically calls 500 customer sites every night—starting with east coast banks as they close for the business day—the downloads and transfers must be synchronized, predictable, and highly reliable. Eighteen locations are dialed at a time, with, on average, two or three minutes needed to input data to the mainframe and 10 minutes for output. Processing time takes around five minutes. 3780Link scripts, which automate the entire range of 3780Link operations, "give us total control over the execution of the file transfers," says Newton. "All you have to do is initiate the thing—3780Link takes it from there."

So comprehensive is the 3780Link scripting language that SunGard "obtains tremendous benefit without even using it to its fullest potential," says Randy Bullard, senior technical analyst at SunGard. "The language lets us go in and receive either print or punch data, and continue to receive until the job queues are empty."

As it was implementing 3780Link, SunGard used Serengeti's sample script files as templates. And SunGard found writing its own scripts to be a painless process: Serengeti's thorough documentation, says Bullard, "goes through each statement and provides informative, easy-to-follow examples."

Error Detection and Recovery: A 3780Link Strong Suit

"We must communicate dependably every night," Newton says. "With 500 locations, you can't have a lot of failures." Yet glitches are inevitable; line quality differs tremendously across the country, and any line can hit a patch of static. Communcations software has to detect the receipt of improper data, then initiate a retransmission. SunGard's mainframe handles this at the SunGard end, and—again, because its powerful scripting language—3780Link takes care of it at the bank sites.

"You never know how many files our mainframe will put out for a site to download," says Bullard. "So that we can be sure they've all been received, the scripts let us wait for a time-out error signifying that no more data is there, then test for a specific error code and branch to another section. Each time, the system either displays an error message or performs a graceful exit." When 3780Link detects an error, it branches back up to the send command and resends the file. It also checks errors and performs appropriate actions based on error codes. A log file is used for problem diagnoses, with a daily audit process ensuring that the database updates are received and written properly at each bank site.

Multiplatform Support for a Diverse Customer Base

SunGard provides the identical functionality across all customer locations. The same scripts are used for each of them, regardless of the specific customer hardware configurations and networks. "This is a key benefit of 3780Link," says Bullard. "It supports all the platforms in our customer environments, including Windows 3.1, Windows for Workgroups, Windows NT, and Windows 95. In fact, Serengeti was probably the first to offer 3780 bisync communications support for Windows 95 and NT. This has given us the ability to implement our solution efficiently for newer customers."

"Plus," adds Newton, "the latest version of 3780Link supports Hayes AutoSync, which is a software-only solution for bisync connectivity. AutoSync lets our customers use the same modem for all of their communications needs—including robust communication via a mainframe-type protocol, as well as more typical on-line services and the Internet."

About Serengeti Systems

Serengeti Systems is the recognized leader in Binary Synchronous Communications (BSC) technology and Remote Job Entry (RJE) PC-to-mainframe connectivity. The company has developed micro-to-mainframe communications products for Windows, OS/2, MS-DOS, UNIX and AIX systems since 1986.

Give Serengeti a call, and find out why customers like SunGard Trust Systems choose Serengeti as their communications provider. For more information about SunGard's powerful trust accounting solution for the banking industry, call 704/527-6300 or see the SunGard website: www.sungard.com.

Serengeti Systems

512/345-2211

www.serengeti.com

Momentum Systems
Division of Maverick Momentum LLC

Cutting-Edge E-Commerce Featuring *BSCLIB*

Highlights

BSCLIB, from Serengeti Systems, is a software tool kit that emulates both the point-to-point Binary Synchronous Communications (BSC) protocol specific to IBM 3780 and 2780 data terminals and the multi-point BSC protocol found in 3270 terminals. The tool kit's Applications Program Interface (API) enables complete control of the information flow between an application and a BSC communications link. BSCLIB is available for all of today's most widely used platforms, including Windows 95/98, Windows NT, UNIX, AIX, and still available for DOS, OS/2, and Windows 3.x.

"Serengeti's BSCLIB product has allowed us to develop the kind of automated, multi-port bisync communications product that's required by today's expanding electronic commerce market. What's more, BSCLIB has enabled us to deliver our product in a Windows NT environment. We are confident that as we continue to deploy our NT version of Intelligent Network Gateway, BSCLIB will help us tremendously in achieving a competitive edge."

Joe Regina
VP, Operations
Momentum Systems

Automating NT Server-Based File Communications

Increasingly, business-to-business electronic commerce is integral to the success of today's large corporations and financial institutions. For an e-commerce solution to produce the competitive edge these companies seek, it must support and manage the wide variety of communications protocols in use by hundreds or even thousands of trading partners. It must provide seamless integration with a wide range of electronic data interchange (EDI) translation mechanisms. And it must enable businesses to exchange information in a way that is fast and reliable.

A tall order, to be sure. Which is why a growing number of powerhouse U.S. commercial banks, including Bank of America, Chase Manhattan Bank, and Signet Bank -- not to mention leading manufacturers, computer service providers, government agencies, insurance firms, and healthcare organizations nationwide-

have turned for help to Momentum Systems. Since 1989, Momentum's flagship Intelligent Network Gateway product has provided companies like these with the sophisticated, automated file communications capabilities they need to do business online. Because the Intelligent Network Gateway facilitates the automatic movement of files among different hardware platforms, operating systems, and communications protocols including BSC, async, SNA, and TCP/IP, it is indispensable to banks for sharing information with corporate cash management clients. And, since it is easily integrated with any EDI translation software, the product enables manufacturers to establish direct connections with their vendors and trading partners for exchanging information across value-added networks which are the backbone for EDI transactions.

In 1997, Momentum decided to port the Intelligent Network Gateway from a proprietary Unisys platform to the Windows NT server -- which offers the superior performance and additional connections needed to meet the market's expanding communications requirements. Recalls Joe Regina, vice president of Operations at the Moorestown, New Jersey firm,

BSCLIB
Multi-Platform Bisync API

Cutting-Edge E-Commerce Featuring
BSCLIB & Momentum Systems

"The port to NT required that we find a completely dependable solution to facilitate the connection of the new NT Gateway to mainframe systems which still utilize IBM's bisync protocol. Believe it or not, this communications technology first introduced in the 1960's is still in widespread use today throughout the U.S."

After evaluating all the options, Momentum chose BSCLIB from Serengeti Systems. "BSCLIB is a product that's been proven in the marketplace," Regina says. "Its easy-to-use, highly flexible API has been crucial in creating our own application to automate the bisync communications process. Serengeti is very easy to work with and has been extremely supportive throughout our NT project. Thanks to Serengeti and BSCLIB, we have produced a single automated NT server-based product that allows customers to send and receive files regardless of platforms or protocols."

A Straightforward API for Controlling Information Flow

According to Regina, BSCLIB's Applications Program Interface (API) is key to the effectiveness of the NT-based Gateway product. "We have to support both the IBM 3780 and 2780 protocols, and automate communications so that a user can sit down at the NT interface and create profiles for how files should be distributed or moved." With the NT Gateway, files show up in the NT server and are matched dynamically to the pre-defined customer profile. Through this profile NT Gateway obtains the necessary parameters which are sent via BSCLIB's API to specify how to transfer a given file.

"All this happens automatically," Regina says. "Without the flexibility of the BSCLIB API, there is no way we could dynamically customize the communications link for every file that comes through -- and this is a key selling point for the Gateway."

Commonly referred to as an open/close/read/write interface, the BSCLIB API provides a comprehensive set of functions to control bisync communications sessions. The product's software development kit (SDK) includes sample programs demonstrating each function -- one of the features that enabled Momentum programmers to complete the NT port in just a few months.

A Productive Relationship With Serengeti

As it was creating the new NT product, Momentum relied on Serengeti for a great deal of critical support. "Serengeti helped us resolve problems and made changes to BSCLIB to accommodate the needs of our specific environment," Regina says. "For example, we needed the software to load without asking for input from the keyboard and Serengeti made the necessary change."

"Moreover," he adds, "Serengeti qualified and helped test a specific modem, which we needed the library to work with. This modem hadn't been on their list, but they made sure it would work with the product. These are just some of the ways in which Serengeti has stepped up to the plate to make our job a lot easier."

Momentum began installing the NT Gateway product in July, 1998. All new customers will receive the NT version, and the company will upgrade its existing customer base

over time. "We're confident that as we continue to call upon Serengeti, they'll respond with whatever support we require," Regina says.

A Multi-Port Board to Support High-Volume Communications

Another way in which Serengeti supported Momentum's NT porting effort was with its 1998 release of the new SmartSync/DCP PCI-bus adapter. This new multi-port intelligent communications adapter enables BSCLIB to maximize the possible bisync connections on the NT platform, thereby allowing users to efficiently exchange a higher volume of data than was possible before.

"Our large customers have lots of lines open simultaneously within the NT server," says Regina. With multiple PCI-bus adapters, Momentum customers can have as many as 40 bisync clients talking to the NT Gateway server at one time -- a capability, says Regina, that is "increasingly crucial to the success of today's massive e-commerce systems."

About Serengeti Systems

Serengeti Systems is a recognized leader in BSC and SNA Remote Job Entry (RJE) PC-to-mainframe connectivity. The company has developed PC-to-legacy systems integration products for MS-DOS, Windows 3.x, Windows 95/98, Windows NT, OS/2, UNIX and AIX systems since 1986.

Give Serengeti a call, and find out why customers like Momentum Systems choose Serengeti as their communications provider. For more information about Momentum's powerful e-commerce solutions, call 800/279-1384, or visit them at www.momsys.com.

Serengeti Systems

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GE Information Services

Industry-Leading E-Commerce Connectivity with *BSCLIB*

Highlights

BSCLIB is a software tool kit that emulates both the point-to-point Binary Synchronous Communications (BSC) protocol specific to IBM 3780 and 2780 data terminals and the multi-point BSC protocol found in 3270 terminals. The tool kit's applications program interface (API) enables the complete control of the information flow between an application and a BSC communications link. BSCLIB is available for all of today's most widely used platforms, including DOS, OS/2, Windows 3.x, Windoows 95, Windows NT, UNIX, and AIX.

"Bisynchronous communication is one of the mainstays of U.S. industry and a predominate requirement for gateway connectivity products. For Enterprise System to reach this market, we needed a solid bisync communications solution that would run on new technology platforms. Serengeti's BSCLIB was a good fit. With BSCLIB, we have the functionality we need to expand our customer base—and the ability to provide today's businesses with sophisticated, reliable e-commerce capabilities."

**David Blaine
Product Mgr.
GEIS**

An Advanced Corporate Gateway for the Global Marketplace

More and more, electronic commerce is a requirement for remaining competitive in today's fast-paced global economy. At the same time, embracing this powerful new technology can be a complex undertaking indeed. To create e-commerce programs that work—programs that successfully facilitate the fast, effective exchange of vital business information with trading partners around the globe—companies need robust ways to integrate legacy and next-generation business applications into their e-commerce environments. They need methods for processing messages from

a variety of applications and platforms as well as help in fully exploiting the rich potential of the Internet.

It's no wonder, then, that more than 150 major Fortune 500 companies in the U.S., Europe and Asia—leaders in everything from manufacturing to retail, transportation to healthcare,

telecommunications to utilities—have adopted Enterprise System from GE Information Services (GEIS). The Enterprise System is one in a suite of several powerful GEIS products and services that help businesses solve their information challenges and internetwork their global enterprise. This communications and information gateway lets firms link their internal enterprise resource planning (ERP) applications, such as SAP and Oracle, with an external trading partner community. With the Enterprise System, businesses also have a platform for leveraging emerging Internet technologies to reach more business partners.

Key to the success of this powerful corporate gateway is its ability, using as a common language the electronic data interchange (EDI) format, to enable seamless communication between a company's internal ERP applications and those of its diverse trading partners—many of whose own business applications run on legacy mainframe systems. "This requires a number of flexible, robust communications capabilities," says David Blaine, Enterprise System product manager at GEIS' Rockville, Maryland, headquarters.

BSCLIB
Multi-Platform Bisync API

Industry-Leading E-Commerce Connectivity With *BSCLIB* & GE Information Services

"When we entered the U.S. market three years ago," Blaine continues, "it became clear that we needed an industrial-strength bisync communications capability to facilitate the mainframe communications so common in this country." In early 1997, GEIS found the solution it needed: BSCLIB from Serengeti Systems.

"BSCLIB offers outstanding flexibility and support," says Blaine. "It lets us get business information off a mainframe, provide translation and routing services as needed, and then send onward for external communications. BSCLIB has all the features and functions we need, provided by a vendor who has been able to adapt the product to our specific requirements. Without BSCLIB and Serengeti's support, we simply could not be as successful providing U.S. corporate gateway customers with the solutions they need."

Multi-port Adapter: Capacity for High-Volume Communications

GEIS' Enterprise System customers tend to have hundreds of trading partners, with whom they routinely exchange purchase orders, shipping and inventory information, account data and other business-critical EDI messages. That translates into a huge volume of communications sessions that must be supported—often simultaneously—by the GEIS gateway.

"BSCLIB is the only bisync communications product with multi-port/multi-board capabilities," says Bing Xu, senior system engineer at GEIS' Brentwood, Tennessee-based Enterprise Development Group. "This is one of BSCLIB's key advantages,

because it makes it possible to have up to 32 clients talking to the EDI server at a time—and heightens our customers' ability to communicate effectively with an ever-widening circle of partners." Blaine goes on to add that BSCLIB provides "the scalable solution our customers require."

BSCLIB's Comprehensive, Easy-to-Use API

The EDI application developed by Xu and his GEIS colleages is, he says, "like an electronic post office that's specialized to deliver inter-company business data." A C program, which is closely integrated with the Enterprise System product, controls all bisynchronous communications by interacting with the EDI server to send and retrieve messages. "When a remote mainframe site calls in," says Xu, "the program accepts calls, prepares for communication, and starts receiving data and passing it to the server. The process is essentially the same for sending data to the remote site; data is continually being passed back and forth between the EDI application and the bisync gateway."

It took the GEIS developers just six months to develop this sophisticated application—thanks in large part to the BSCLIB applications program interface (API), which is commonly referred to as an open/close/read/write interface. "The API was straightforward and easy to use," says Xu. "The functions provided by the API lent themselves to a straightforward design of our application. The sample program included with the BSCLIB API helped a lot. We based our program on it—and this really went a long way toward streamlining the development process."

A Strong Continuing Relationship With Serengeti

As the GEIS developers were creating their bisync communications program, says Xu, "Serengeti was very helpful. Whenever we had problems, we'd just call them, and they would respond very quickly with whatever we needed." What's more, Serengeti continues to provide tech support and enhancements as the Enterprise System project proceeds. "I can call them anytime," Xu says, "and they invariably provide all the assistance and support we might require."

About Serengeti Systems

Serengeti Systems is the recognized leader in Binary Synchronous Communications (BSC) technology and Remote Job Entry (RJE) PC-to-mainframe connectivity. The company has developed PC-to-legacy systems integration products for Windows 3.x, Windows 95, Windows NT, OS/2, MS-DOS, UNIX and AIX systems since 1986.

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