

ABOUT THE COVER

In the United States market, GE Information Services applies a sound business strategy across industries and geographies. Thinking globally, the U.S. team is penetrating key industry focus areas while growing the business in strategic geographic areas.

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GE Information Services

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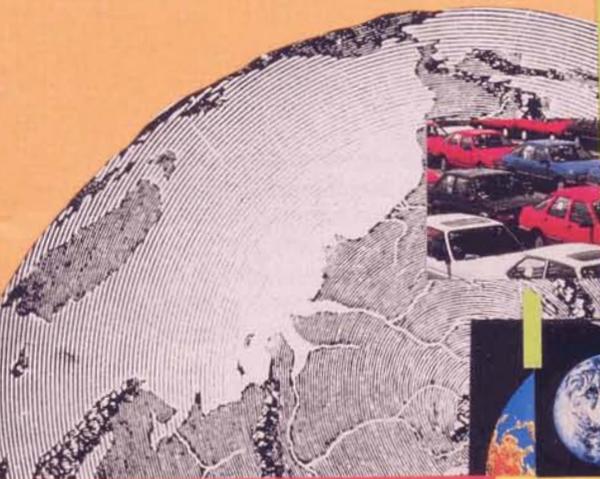
WINNING STRATEGIES FROM COAST TO COAST

GE Information Services approach to the United States market applies sound business strategies across geographies and industries and at the same time takes advantage of special regional and industry needs.

This is the first of a two-part story that looks at the North American market. In this issue, SPECTRUM looks at five industries identified as focus areas for the United States, including two that are now expanding globally, and at the strategy for growth in major metropolitan areas of the U.S. In the next issue, SPECTRUM will look at the business in Canada and at how GE Information Services supports GE Corporate and other GE components.

IN THE NORTH AMERICAN market, companies are rethinking their strategies in light of the changing global landscape. The nation as a whole has gone through a crisis in confidence, as it watched its number one position in industry after industry challenged by competitors from Japan and more recently from Europe. This jolt to American industry has spurred increasing attention to quality in





PURCHASE ORDER

products and services. And companies are looking for ways to improve quality without driving costs up—indeed while driving costs down.

"The business climate in the U.S. today is ripe for our services," says Haskell Mayo, vice president, North American Sales & Services. "The drive toward globalization of markets and the need to gain greater productivity while raising levels of quality play to our strengths, and we need to capitalize on that. Above all, we must give superb service to our clients so they can give superb service to theirs."

IN THE RETAIL BUSINESS, SERVICE has always been a distinguishing factor. But in today's market, in which consumers have many more choices about where to spend their consumer dollar, quality of service and efficiency of operation can make or break a retail chain.

In this fiercely competitive industry, how are the toughest players sharpening their competitive edge? Retailers are embracing EDI both to streamline their operations and to build solid business relationships with their suppliers.

GEIS has been providing EDI to the retail industry since it began offering EDI.

"You might say we've grown up with the retail market in learning how to bring greater efficiency to their operations," says Al Boynton, marketing manager, Retail Industry. "Today the name of the game is Quick Response and we're a leading player in that game."

Today GEIS offers a family of products and services that help retailers provide Quick Response—having the right merchandise on the shelf when the customer wants it. In addition to the full suite of EDI offerings, GEIS offers UPC*Express Electronic Catalog and Cross Reference software that gives retailers fast, reliable information they need to manage ordering, receiving, price checking, item tracking, and sales analysis.

GEIS provides EDI to some 75 retail operations and mass merchandisers and 2,000 of their suppliers. Its growth strategy is threefold.

First, GEIS will continue to solidify



its relationships with present retail clients by expanding its support services.

"As is true in other industries we serve, we should approach our retail clients with system solutions that use all our capabilities to respond to their total business needs," says Todd Fryburger, manager, Retail Industry. "EDI will always be fundamental to our serving this industry, but like any other business, retail has dimensions other than forging relationships with suppliers. Right now we're working with marketing to define the dimensions of a BusinessTalk application for the retail community."

A second dimension to its growth strategy is to redefine the retail industry.

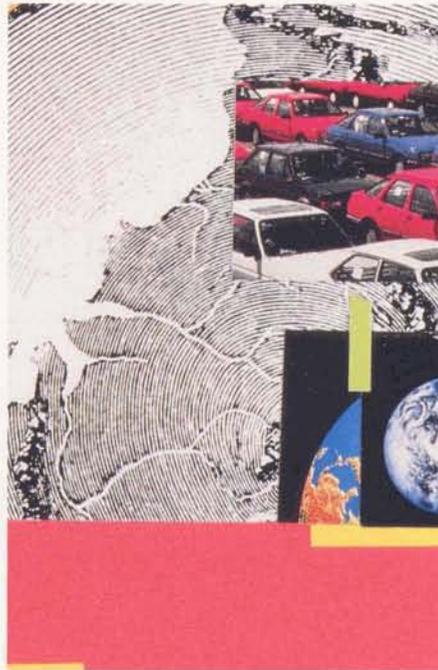
"Retail is far more than just department stores and mass merchandisers," says Todd. "It's fast food chains, furniture stores, and hardware chains. It constitutes a third of the consumer market. So we have to broaden our horizontal view of the market and also our vertical view. Manufacturers directly supporting retailers—apparel, jewelry, sporting good, toys—are also a viable market. We can draw on our industry expertise to find ways to support this retail market as well."

A third dimension of the strategy is to begin to penetrate the credit systems market.

"We've commercialized the credit system originally developed for Catherine's," says Todd. "Now we have to find the right market for this application."

AS THE U.S. AUTOMOTIVE AND manufacturing industry enters the decade of the '90s, it faces increased competition from non-U.S. manufacturers, especially from the Japanese, who now command 27.5 percent of the U.S. automotive market. To regain market share, American manufacturers are strengthening their distribution channels, increasing their manufacturing efficiencies, and shortening their product development cycles.

The GEIS Automotive/Manufacturing industry team is exploiting these trends by leveraging GEIS core products and international infrastructure and forming alliances that add industry specific



software to GEIS' solutions tool kit.

As competition increases, American manufacturers are making major investments in their distribution channels to gain market share. They are making greater use of technology like Data Communications Systems (DCS) to accelerate the movement of information from the customer to the plants. Historically, GEIS has worked with manufacturers to provide some or all of the modules that make up these systems. DCS clients include Chrysler, Peugeot, and, most recently, Mazda. GEIS will continue to penetrate this market by partnering with manufacturers to provide comprehensive services to their dealers and distributors.

In mature markets like automotive/manufacturing, base cost reduction is as important as growing the top line. To gain cost effectiveness, manufacturers are moving to Just-In-Time management—having material arrive at the plant just when it is needed. EDI is one of the linchpins of the Just-In-Time philosophy. Our key EDI clients in this industry include Caterpillar, Chrysler, and Nissan.

To enhance its position in this market segment, GEIS is augmenting its software portfolio with alliances. An

alliance with Wagner Systems enables GEIS to offer Kanban and Scanning software, both critical to Just-In-Time operations. Another with MSI positions GEIS to add quality software to the front end capabilities of DESIGN*EXPRESS.

While manufacturing efficiencies are important to manufacturers, shortening product development cycles is critical. To be competitive in shrinking markets, a manufacturer must get to market first or be frozen out. The key to doing this is concurrent manufacturing, an approach that involves all parts of the manufacturing cycle at the conceptual stage, so design flaws can be identified at the outset rather than well into production.

This approach to doing business requires tremendous movement of data on an intercompany basis. To penetrate this market, GEIS has entered into an alliance with ITI, a Cincinnati based firm specializing in concurrent manufacturing and IGES translation software that facilitates communication of CAD/CAM files between incompatible systems. Additional alliances being formed to gain direct CAD/CAM translation software will ensure success in this promising market segment.

"The automotive/manufacturing industry depends on intercompany systems to increase competitive position," says Jim Conners, manager, Central Area. "The international scope of the industry and the excellent reputation GEIS enjoys in it puts us in a good position to assist this industry in its renaissance activities. It's a tough market, but one worth focusing on and winning in."

IN THE FAST PACED, HIGH RISK computer industry, ability to bring product to market ahead of one's competition can determine market leadership. Hardware companies rely on outside software developers to create applications that will make their computer platforms more attractive. Software developers compete for the attention of distributors who can place their software in the hands of dealers and retailers. To compete in this volatile market, hardware and software developers are banding together with each

other and with their distributors and dealers in close business partnerships. For these partnerships to be effective, they must have open lines of communication for dynamic exchange of information.

GE Information Services has served this industry since 1985, when it partnered with Apple Computer to develop an on-line vendor support system. The system, called AppleLink, many times upgraded since the original installation, has now become part of Apple's culture. The system provides vital, real time data and information exchange to Apple's 2,200 dealers worldwide. Internally, it has become the medium of choice for exchanging information with colleagues.

GEIS then expanded this technology to other major players. In 1988, Microsoft experienced explosive growth in the number of original equipment manufacturers and software developers working on its OS/2 platform. To serve this growing development community, Microsoft decided to abandon its VAX system, which relied on long distance telephone and Telenet, and replace it with a fully functional electronic system. GEIS was the vendor of choice to develop the system.



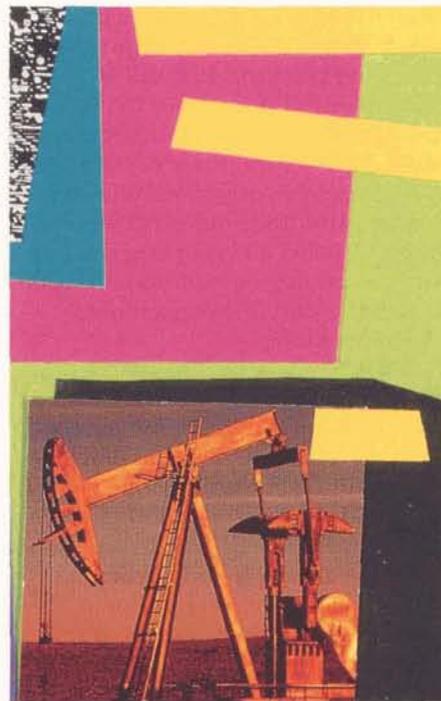
When Sun Microsystems, Inc., wanted to expand its technical support program to include on-line support, it chose to work with GEIS because of our track record in the industry, consulting expertise, and international reach. The result was NeWSware, the industry's first UNIX-based support system available across a wide area network. Now the computer industry team is working with Sun to deliver new UNIX-based wide area solutions for other organizations at Sun.

Working with these three clients, all of which are on the leading edge of technology, pushes GEIS to provide state-of-the-art applications to respond to their dynamic information needs. And as business partners with these technology leaders, the GEIS computer support team has gained intimate knowledge of the way hardware and software companies work, the challenges they face, and the information requirements that will keep them a step ahead. As a result, GEIS is having considerable success in penetrating the industry.

"This is a very tight industry," says David Page, manager, Computer Industry. "Once you establish your credibility, doors open more easily. But that's not to say it's an easy sell. We have to demonstrate with each client that we understand their needs and can provide a solution that is totally responsive to those needs."

THE OIL INDUSTRY HAS LONG been fertile ground for GE Information Services. In the timesharing days, oil companies used GEIS computers for analytical studies to support activities like oil exploration and drilling operations. At the height of timesharing, the oil industry was one of GEIS' major sources of revenue. Then two things happened simultaneously: the bottom fell out of the oil business and the bottom fell out of timesharing. GEIS revenue from this industry plummeted and the company was looking seriously at closing the Houston office and looking for business elsewhere.

But as GE Information Services redirected its business to network-based applications and data exchange and the oil companies refocused their



activity on refining, a new fit between the two appeared.

The interdependencies of those in the oil refining chain as well as the sheer volume of oil passing along these chains makes the oil industry an ideal candidate for EDI. Since 1986, a small band of GEIS sales, SDC, and marketing people have been establishing GEIS as the EDI provider to the oil industry. Today it supports the operations of all major oil companies and has become an industry spokesperson and consultant to such organizations as the American Petroleum Association. GEIS continues to build its portfolio of industry specific EDI applications, such as PipeNet and Joint Interest Billing, and at the same time is expanding its support of the industry by offering a broader range of applications.

"We're looking at applications developed for other industries to see how they can be adapted to the needs of the petroleum industry—applications like financial consolidation, credit card authorization, treasury management, and distribution systems," says Bill DeLeo, manager, Petroleum/Southwest Region. "In addition, we are creating new capabilities for the industry, such as

Petro*Comm, a price change notification system needed by all producers of refined products. EDI will be the cornerstone of our service to the industry, and we will leverage this to expand far beyond these capabilities.”

Last year, petrochemical was identified as a worldwide industry focus area, and since then GEIS people in countries with oil refining operations have been working toward forming a more global operation.

“The oil refining business is a natural for worldwide focus,” says Bill DeLeo. “Wherever oil is refined, the process is the same. So the applications developed to support the industry in one part of the world should work in other parts of the world as well.”

In fact, as people supporting the petrochemical industry began to compare notes, they discovered that they had independently developed applications that are quite similar. An application developed in Italy, the Oil Exchange System (OILEX), for example, has features similar to the U.S. PETRODEX system. Canada, Norway, and the U.K. have products serving the same functions as the U.S. Joint Interest Billing application.

“Pooling our efforts and working as a worldwide petrochemical team will benefit industry penetration in all parts of the business,” says Bill.

“THE TELCO FOCUS IS FAR AND AWAY dedicated to the care and feeding of GTE,” says George Alber, manager, Telco. “GTE is GEIS’ largest customer and one that continues to offer opportunities for growth.”

GTE has been a client of GEIS since 1972, when the Mechanized Assignment and Record Keeping (MARK) system was first developed for GTE of Florida. MARK is a completely integrated facilities management system that automates the complex process of initiating and supporting telephone service. The system enables GTE to provide fast, accurate, quality service to its customers while greatly enhancing the company’s productivity and cost effectiveness.

Since its original development, the MARK system has been continually



enhanced as the supporting team gained greater understanding of a telephone company’s requirements. At the same time, use of the MARK system for facilities management has spread throughout GTE’s regional companies.

GEIS supports GTE in four ways: providing strong customer support for existing implementations, continuing to deliver full implementation of the system throughout GTE’s operations, developing enhancements to existing services, and creating new services.

In the telephone business, customer service is paramount. Enhancements to services that result in ease of use give a telephone company competitive advantage. The GEIS team supporting GTE constantly looks for ways to offer such enhancements. A new capability planned for the MARK system, for example, will enable customers to add features like call waiting or call forwarding without ever having to call the telephone company. An application called “Customer Moves and Changes” will let customers make changes to their service from a PC. The PC communicates directly to GTE’s switching equipment to automatically initiate the change in service. This application not only improves customer service, it also eliminates the paperwork associated with ordering new services and reduces the

cost of providing the service.

While the team looks for ways to enhance existing applications, it also looks for ways to expand its support for GTE. This year, for example, the sales force uncovered an opportunity to support network planners within GTE. The GTE team recognized that data stored in the MARK system is key to projecting future networking needs. The sales technical staff developed the Customer Access Planning System (CAPS), which allows network planners to use basic information in the MARK system together with growth projections gathered on GTE internal systems to forecast and plan for additions to the GTE network.

“GTE is such an important client that the Telco team is always pushing itself to make sure that we are at the leading edge of technology in support of the telephone industry,” says Al Moss, GTE region manager. “We simply have to keep proving to GTE that we are the best.”

WHILE THE U.S. IS HONING ITS industry focus, GEIS will always maintain a strong presence in the major metropolitan areas of the U.S.

“We have some very major clients outside the focus areas, whose business we must nurture,” says Haskell Mayo. “For example, we don’t presently have a focus in the food and beverage industry, but we certainly are committed to the Coca-Cola Company.”

Supporting such clients is a major part of the charter of the regional sales managers, but their charter is much broader than that. Regional sales forces continue to apply consultative sales techniques to capture additional business within their regions.

The same things that drive companies within the focus industries drive clients in the general business: the need for greater efficiency in operation, the need to get closer to their customers, the need to manage geographically dispersed operations. Regional managers across the U.S. emphasize the need to establish GEIS as a strategic business partner to these businesses and then to sell GEIS services both vertically and horizontally within the company.

The general business teams have been given another challenge as well. "Our teams provide the springboard to new industry focus areas," says Barbara Cresswell, manager, Midwest Region. "We not only provide the testing ground for new focuses, such as hotel management, but we also keep an eye out for the next new industry focus. Right now several regions are looking at pharmaceutical, food and beverage, and insurance as potential new focuses. And we also work as a group to identify cross industry applications, such as sales force automation."

IN THE EASTERN PART OF THE United States, where GEIS has a high concentration of Fortune 500 companies, forging business partnership is a major part of the sales force activity.

In the New York City region, Izy Franco has as one of his goals making GEIS the sole information services provider for all GEIS' Fortune 500 clients. He already has a commitment from several key clients. In addition, this region has several mini focuses, industries in which the sales force has gained industry expertise that can be applied to other companies within the industry. These mini focuses are in the pharmaceutical, publishing, and advertising areas—industries heavily

"ABOVE ALL,
WE MUST GIVE
SUPERB SERVICE
TO OUR CLIENTS
SO THEY CAN GIVE
SUPERB SERVICE
TO THEIRS."

*Haskell Mayo,
vice president,
North American Sales & Service*

concentrated in the New York City area.

In the New England area, also rich in Fortune 500 companies, the sales strategy focuses on developing both the present client base as well as new name accounts.

"We're committed to strengthening our relationships with our key clients through excellent account management and support and through broadening our exposure within the business into multiple functional areas," says Al Vanek, manager, New England Region. "We believe this strategy will allow us to not only protect but also grow our revenue in these accounts. At the same time, we are aggressively seeking out new accounts through a consultative approach to high level functional managers, stressing our ability to provide high value, integrated networked-based application solutions that address their critical business needs."

THE SAME APPROACH IS BEING taken in other parts of the United States.

For John Adams, manager, Southeast Region, the key is uncovering the right business opportunities.

"There is plenty of business out there," says John. "Our job is to identify the ones that can best benefit from the kinds of services we offer and then penetrate those businesses, both horizontally and vertically. I look at companies that have at least 100 opera-

tional sites in the United States and 10 outside the U.S."

Region managers on the West Coast use the same criteria. They focus on pre-sales effort to identify the right business opportunity. Then once they penetrate an account, they focus on building business partnerships that enable vertical and horizontal penetration of the company.

"We're applying the same principles that are being applied in the industry focus areas," says Tim Lee, manager, Northwest Region. "You might say we're becoming operational experts. We learn the basic operations and industry forces that drive any business. Then we contact the executives of those businesses that can most benefit from our services. At the same time, we take what we learn from one sales opportunity and apply it to similar businesses. Here on the West Coast, we're doing this with semiconductor companies, about half of which are located here."

In the Los Angeles area, several industries show promise: the aerospace industry, which is heavily concentrated in that part of the United States, the insurance industry, which, with the broader acceptance of standards, is beginning to look beyond IBM solutions—and, of course, entertainment.

"The entertainment industry is a business like any other business," says Dennis Steffe, manager, Southern California Region. "They have sales, marketing, and finance operations. In fact, the big studios have heavy processing requirements. As these companies begin to downsize and flatten their operations, turning to third party service providers will make increasing sense. And with companies like Sony entering the business, their needs are going to become global."

"Our region managers and their teams across the United States are acquiring business expertise and applying it successfully," says Haskell Mayo. "Our dual strategy of industry expertise and general business expertise is serving GEIS well and has enabled us to exceed operating plan two years running. The transition hasn't been easy for any of us, but our bottom line has always been results."



BANKING ON A WINNER

The Australian banking team is building an integrated services platform for Westpac Banking Corp., which they believe will revolutionize the way banks support their corporate customers.

WESTPAC BANKING Corp., Australia's largest commercial bank, is among the most advanced banks in the use of technology in its banking operations. Westpac has long been a client of GE Information Services for its cash management operations. The Australian banking team has won the respect of the bank because of their industry expertise, network and processing capabilities, responsiveness, and reliability.

But in 1988, Westpac made a strategic decision to move its balance reporting and funds transfer system in-house. Another division of the bank was putting in place an extensive networking capability, and it seemed to make economic sense to run the applications on that network. At the same time, those in the bank responsible for cash management were somewhat wary of leaving a proven, reliable network services provider to risk their future with an unproven internal system.

GE Information Services saw this as an opportunity to push the bank to reevaluate its entire approach to cash management services. Rather than taking the short-term approach of

proposing an updated and enhanced version of the funds transfer application, GEIS proposed a whole new approach to corporate services: offering corporate clients a single window to their financial information world.

Corporations in Australia, like corporations everywhere, are demanding better service and information from their banks. As they expand their operations, they require access to global sources of information. They need to respond quickly and cost effectively to market opportunities and are frustrated at having to rely on a number of systems and services to address their financial needs.

Banks face a similar problem. In most banks, MIS, treasury, EDI, and bank systems are not integrated. This creates an information gap that interferes with levels of service and response times to clients.

"Typically banks build a service, such as trade finance, and then develop a delivery mechanism to hook up corporate clients," says Daniel MacLeod, Banking Sales, Sydney. "This has one part of the bank competing not only with services of competitor banks but also with other divisions of their own bank. Moreover, banks are ill disposed

to listen to what their corporate clients need. Our strategy was to persuade the bank to adopt a single integrated market approach for corporate services across the bank."

THE SOLUTION GEIS PROPOSED would give corporate clients access to a full range of banking services through a single window, whether the application was resident within the bank, on the GEIS network, or in a third party data base.

"Building today for the services of tomorrow forces all parties to review their strategic plans," says Judy Vorwerk, SDC Manager. "Only by evaluating emerging trends and developing systems that are based on a common infrastructure can a bank and its corporate clients avoid continuous short-term redevelopment exercises."

GEIS is now building what it calls the Westpac Integrated Services Platform (WISP). The WISP system provides a total services platform capable of delivering financial services simply and quickly through a common gateway. For the client, this offers ease of use and seamless access to their banking needs. For the bank, it means the ability to provide a higher



level of service, thereby winning customer confidence and loyalty.

A key benefit of the system is that it can easily be expanded to offer additional functions like electronic data interchange. It can interface to other GE applications like the Global Limits System used by the Treasury division of the bank as well as to applications housed elsewhere in the bank.

As part of its total solutions proposal, GE Information Services is also developing a new payment instruction service known as the Approved Transfer Delivery System. This system is an independent application resident on the GEIS network that is responsible for routing corporate payment instructions. It's called "approved transfer" because the application takes care of preliminary validation of transfer requests and enquiries. It delivers to the Westpac host only those transfers that have been fully authorized and approved.

THIS APPROACH BENEFITS BOTH the customer and Westpac. It gives the corporate clients superior network response by removing the task of preliminary processing from the host. The client receives immediate approval and so is protected against excessive exposure and the associated settlement risk. For the bank, the application means significant cost saving because the Approved Transfer Delivery System uses the processing capability of the customer's PC and the Westpac host to speed up operations and eliminate redundant storage. More importantly, the bank has access to corporate requests as they occur, so they can better manage their cash dealings and commitments.

"All credit goes to the GEIS development team for thinking laterally and focusing on the customers," says Phil Heavener, Banking Sales Manager, Westpac. "The Australian team has done an outstanding job of using creative ingenuity to package GEIS capabilities for both networking and processing in a single offering."

While the Australia team deserves a lot of credit for taking this forward looking approach, it is quick to point out that it had superb support



The Westpac team (left to right): Daniel MacLeod, Hugh Seppelt, Paul Baird, Mike Lyons, Colleen Hill, Gert Roehmer, and Jim Starr.

throughout the project. From Rockville Engineering, Bob Loew, Kirk Stanfield, Gwen Risinger, and Henry Davis all contributed time and talent to the project. Bob and Kirk helped think through the original design concept. Henry designed the data base recovery features of the system. Gwen spent two months with the team working on coding and data base design. Brian Hebener from the Western Technical Center spent six months in Australia, contributing his IBM PC experience and background in MARK III programming. Harold Fuchs from European Client Systems came from the U.K. to work with Henry Davis on the applications recovery coding.

On the networking side of the business, Joe Squarzini's Operations people made a serious commitment to the project. They made adjustments in their maintenance operations to make sure that Australia has the processing power they need during their peak business hours—slow time in other parts of the world. Client Services International has instituted solid support procedures that have reduced

after hours work in Australia by at least 100 hours a month.

The Australian banking group is convinced of the viability of the application. The interactive, integrated approach to Corporate Financial Services embodied in WISP is being tested in the banking market as WEB, Windows on Electronic Banking.

"WISP can be viewed as an extension of the bank to the corporate customer's office," says Daniel MacLeod. "It offers a single window to the corporate banking world—treasury dealing, account reporting, funds transfer, trade finance, or other electronic services offered by the bank."

"The WISP concept is a classic example of how GEIS should be working with clients to develop a business platform that allows them to compete more effectively in their respective markets," says Quentin Gallivan, manager, Australia. "GEIS industry expertise and application integration coupled with the client's in-house strengths created a real sense of partnership in the development of this strategic electronic banking technology."

QUALITY WINS THE DAY

Teleinformatica, GE Information Services' distributor in Spain, took a consultative approach in winning a major contract with Spain's top ranking bank. Their reputation for quality service helped too.

BANCO BILBAO VISCAYA (BBV) ranks number one in the banking community of Spain, with the greatest share of the banking business of large companies or corporations. BBV had been the pioneer in Spain in providing cash management services and wanted to expand into more electronic financial services. BBV is the most aggressive bank in the market, convinced that the future of banking rests upon giving more and better services. It believes that competition among banks lies in quality of services, not in prices.

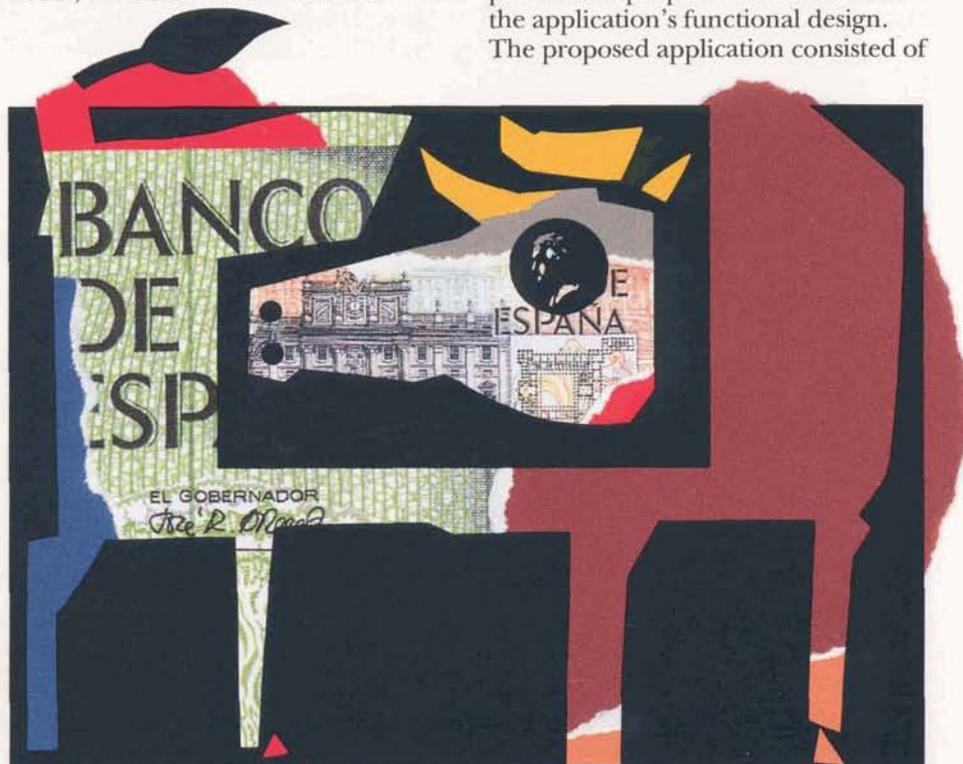
In the increasingly competitive banking market, several other leading banks were approaching the same level of service as BBV. To maintain its number one position, BBV looked to expand its service to encompass all document interchange between corporate clients and the bank.

Teleinformatica, GEIS distributor in Spain, had been providing services in cash management to support Banco Bilbao's more than 1,000 companies, using the GE Information Services network. The cash management system in place at the bank covered only the sending of information from the bank to the client. Therefore, GEIS had to

find a way to integrate the other side of the information flow—from the client to the bank—to complete the interchange.

To get a clear understanding of corporate clients' total financial needs, the Teleinformatica team

performed a detailed consulting study at the bank. There, they observed first hand all the kinds of transactions sent to the bank by their clients through paper or magnetic tape. Once the documentation was studied, the team produced a proposal that included all the application's functional design. The proposed application consisted of



a system integrated with the cash management application so that the bank's client companies can both obtain information about their financial status from the bank and send any financial documents—payrolls, funds transfer, negotiables instruments—according to their needs.

The sole competitor for this business was Tandem Computer who proposed an in-house system, using BBV's own extensive network system and Tandem's fault-tolerant computers. The Tandem solution would integrate the bank's cash management service with every electronic interchange between the bank and its clients.

TELEINFORMATICA WON THE project because of BBV's experience with the good quality of their services. The bank is fully aware of Teleinformatica's development capabilities and technical support, so they are confident that they will receive high level service for the 4,000 companies they wish to serve. Their endorsement is the result of the spirit of collaboration that Teleinformatica

has maintained in all their commercial relationships.

"Our sales strategy was mainly a well done consulting job that reinforced our solution," says Pedro Lopez, sales and marketing. "The rest of the work consisted of selling the solution within the bank to all the departments involved in the services."

Expanding Banco Bilbao's cash management capabilities gave Teleinformatica the opportunity to upgrade the quality of service as well. Users of the original cash management system were accessing the system using aged asynchronous TTY based terminals. The new system uses a sophisticated front end program on MARK III that enables the corporate client to elect either to connect to MARK 3000 to access cash management services or to stay connected to MARK III to use the QUIK-COMM system. This solution enables the corporate client to preserve his investment in outmoded hardware while deriving the benefits of more advanced technology.

THE MAIN BENEFITS FOR BBV ARE that the system is integrated with its current cash management service. It allows unlimited growth as the bank attracts new customers. Within BBV, they talk about expanding to around 4,000 or 5,000 users. Also, BBV looks for continuous support of applications as well as specialized service to their clients. BBV's experience with Teleinformatica makes them confident that development tasks and improvements to the system can be achieved in much less time than they might have expected from the competitor.

For Teleinformatica, this is a major piece of banking business because of the potential to support such a large customer base of Spanish and multi-national companies. Moreover, the agreement with BBV gives Teleinformatica copyright to the application, so they can offer the service to other banks as well.

The key players in the win were Pedro Lopez, sales and marketing, Enrique Vera, SDC, and Manuel Roque, project manager.



INTO THE

21ST

CENTURY

GE Information Services and
the Association of American Publishers
form partnership to revolutionize
the way bookstores order books.

STEVE VANA-PAXHIA, THEN vice president of MacMillan Publishing's College Division, was somewhat of a visionary back in 1985 when he approached his colleagues at the Association of American Publishers (AAP) with the idea of developing an electronic system for processing book orders. At a time when the public in general and the publishing business in particular was somewhat wary of electronic data interchange and only the bold were readily embracing it, Steve Vana-Paxhia believed that EDI would eventually become an essential part of the industry, as rising costs made it imperative to increase efficiency.

Using conventional industry practices, book ordering in the college bookstore market could be a harrowing experience and at the very best was slow and

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ORDER FLOW,
WE'LL LOSE THE DAY."

*Parker Ladd,
Managing Director
PUBNET*

inefficient. During the peak ordering pockets preceding the beginning of each term, bookstores rushed to get orders filled and books onto the shelves before classes began. Most ordering was done by telephone or by mail. The former method often meant leaving countless call-back messages; the latter was quite simply—slow.

The book ordering process was further complicated by the need to verify titles. College textbook titles number in excess of 130,000 and have a high frequency of change. To verify availability of titles, bookstores had to call the publisher or refer to *Books In Print* or other references, which, because of the dynamic nature of the industry, were often not current.

THIS APPROACH TO BOOK ordering was not only a hassle for the



Vince Iuzzolino, GEIS account executive (left), and Parker Ladd, Association of American Publishers, have worked in tandem to promote the concept of PUBNET since 1985.

college bookstores, it was inefficient for the publishers as well, whose personnel were tied up in verifying availability of titles and accepting book orders by phone. An electronic order system would not only reduce staff requirements but also greatly reduce the order cycle time.

Steve Vana-Paxhia proposed an electronic order system that would be shared by all the major publishers of college textbooks. This, he argued, would be of advantage to all participants at an affordable cost. He was so persuasive that the association formed a committee to study the potential benefits of using EDI within the college publishing community. The committee did more than just report back on the possibilities, they submitted a proposal to the heads of college publishers for development of a publishers' network, which the committee dubbed PUBNET.

"From the beginning of the dream of PUBNET, there was no trepidation, no doubt on the part of the 'grandparents' of the system," says Parker Ladd, man-

aging director of PUBNET. "Everyone was committed and thought it was a very good thing that so many in the industry could join into the project economically and contribute their time, effort, and imagination."

Seventeen companies were invited to bid on the contract. Four, including GEIS, responded with proposals.

"While EDI was relatively new at the time, GEIS had anticipated its future demand and had enough EDI experience to come back to the AAP with a comprehensive proposal that included a data base of college textbook titles that is updated daily and EDI*EXPRESS for purchase order transmittal and acknowledgement," says Vince Iuzzolino, account executive, who has supported PUBNET from its inception. "Customized PC workstation software enables bookstores to access MARK III to make inquiries to the database and create and transmit purchase orders in the industry standard format."

The system is so user friendly that it almost can be self installed and once

installed, the system can be mastered in a matter of minutes. The benefits derived on both sides of the book ordering process are significant.

PUBLISHERS ON-LINE WITH PUBNET can provide better and faster service at lower costs. This often makes them the vendor of choice, thereby increasing sales. Bookstores have immediate access to current title status. Orders can be processed quickly and the bookstore receives next day acknowledgement of an order. Most bookstores see their book order cycle reduced from several weeks to 4 to 5 days.

PUBNET went into operation in June 1987. Within a month, 120 bookstores had signed up to use the system. Today, PUBNET processes 130,000 electronic orders being sent to 35 publishers from 1,000 college and trade bookstores. And where EDI isn't in place, sales reps from participating publishers can still send orders electronically using laptops and modems.

Vince Iuzzolino expects to see sustained growth in use of the system, both by publishers and bookstores. Why this optimistic view? Marketing efforts on the part of both the association and GEIS are being stepped up. And public awareness of the benefits of EDI is growing.

"PUBNET has won over growing numbers of bookstores and publishers with its potential for efficiency, service, and cost saving benefits," says Vince Iuzzolino. "We're very pleased at how far we've come and confident about where we're going."

"We have to move into the 21st century," says Parker Ladd, managing director of PUBNET. "If we don't take advantage of the technology available today to enable more efficient order flow, we'll lose the day."



WHEN EAST MEETS WEST

To capture Japanese business, understanding the Japanese business culture can be as important as proposing a superior product.

WINNING WITH Japanese companies, whether U.S.-based or in Japan, requires more than having a superior solution. It requires doing business the Japanese way. Having friends in Japan helps too.

When GE Information Services discovered the opportunity to propose a dealer communications system for Mazda Motor of America, GEIS began its strategy by going to Japan. Recognizing that the first step to winning Japanese

business is to establish a rapport with the business decision makers, Ray Rike, account manager, Automotive Industry, called upon our Japanese joint venture company, ISI-Dentsu, to open some executive doors.

"Japanese businessmen like to do business with other Japanese," says Ray Rike. "In the U.S., while middle managers may not be Japanese, the top level decision makers in Japanese firms always are. And they conduct business in the U.S. by consensus management just as they do in Japan.

So getting ISI-D's support was critical to winning this business."

ISI-D offered its support on both sides of the world. In Japan, ISI-D leaders met with Mazda executives to persuade them that GEIS is a leader in providing network-based solutions and is a good company to do business with. In the U.S., Watan Suzuki, president of ISI-D's U.S. operation, accompanied Ray on his initial visits to Mazda Motor of America to introduce him to key decision makers within Mazda. Meanwhile, Paul Tamura, technical rep, was

busy building a superior solution.

Mazda Motor of America was formed in 1988 through the merger of separate operations on the East and West coasts. Prior to the merger, each group had internal dealer communications. The West Coast ran on the GEIS network; the East Coast on Telenet. Merging the two businesses meant merging the dealer systems onto a single VAN. Thanks to our Japanese friends, GEIS won that contest.

IMPROVING CUSTOMER SERVICE was the new company's driving goal. They wanted to enhance in-house systems used for such operations as order entry, parts inventory, and vehicle location with an overall electronic messaging service that would provide closer links between headquarters and the nearly 1,000 independent Mazda dealers and 200 district managers. The first step to doing that was for service departments to more closely monitor the quality of new product offerings. Mazda invited Telenet, Tymnet, and GEIS to propose a network-based solution that would enable Mazda's 48 dealers who monitor the quality of products to gather quality data and product concern reports electronically.

GEIS recommended a customized workstation using PC Mailbox and Express*Forms, a software package originally developed for Chrysler. Express*Forms enables a central location to develop form templates and send them electronically to dealers. Dealers can pull the forms, complete them off line, and then return them electronically. Not only did GEIS propose an integrated solution, we offered more. GEIS proposed customized documentation, on-site training, and dedicated client services support to ensure the smooth implementation of the system.

THE TWO EFFORTS—WINNING support at the senior management level through the efforts of ISI-D and offering a total solution—won the business and was the proving ground for a larger opportunity.

Mazda recognized the business benefits the dealer communication



From left to right, Paul Tamura and Ray Rike of the GEIS Automotive team with Mazda's Bill Visser. And, yes, the car is Mazda's popular new Miata.

workstation offered for its entire dealer population, so the original limited system was expanded to provide the workstation to all district managers and dealers. Using applications running on the workstation, headquarters can more effectively communicate with its geographically dispersed dealers. They can communicate electronically such information as sales incentives, service bulletins, and recall information. By using Express*Forms, they can facilitate completion of such things as Customer Relations Forms and Product Concern Reports. Mazda's 200 district managers, who monitor parts, sales, and service operations at their assigned dealers, can use the workstation for communicating travel schedules and daily contact reports.

Mazda again selected the GEIS proposal because it saw the merits of a single source solution. Mazda believes that the system proposed by GEIS will give it a competitive advantage over other Japanese companies by providing better support to its dealers and

ultimately better service to its customers.

"Winning a major contract with a Japanese firm involves a long sales cycle," say Dan Wecker, region manager. "But once you win the business, it tends to be a long-term relationship."

That was the case with Mazda. In selecting GEIS to develop its dealer communications system, Mazda has committed to making GEIS its information services partner. In fact, Mazda has already engaged GEIS to play a consultative role as Mazda undertakes to upgrade all internal applications they use to run their business.

At the same time, GEIS, with its greater understanding of the way Japanese firms do business, sees opportunity to forge similar business partnerships with other Japanese auto makers in the U.S.



WITH ITALIAN APLOMB

Consultative selling won the business of Philips in Italy. The Italian team showed the big company how to solve its business problems.

PHILIPS CONSUMER Electronics in Italy had a problem. Europe's largest consumer electronics company and the world's largest manufacturer of color television receivers was being outperformed in the Italian market by smaller companies.

Philips operates six factories in Italy. Its business activities are mostly concentrated in consumer electronics, small appliances, medical systems, electronic components, and lighting. Philips products are sold at about 10,000

stores throughout the country and are serviced at some 600 authorized technical assistance centers. The big company needed to get greater control of its far flung operations. To compete more effectively in the Italian market, Philips recognized the need both to make its own sales force more effective and to improve its support for the technical assistance centers that service its products. Market research showed that Philips had a negative image for service after the sale.

In meetings between GEIS Italy and

Philips, GEIS was able to demonstrate that the volume and geographic spread of Philips' distribution required an electronic order entry system to speed the flow of information from the point of sale to the point of delivery.

In response, Philips requested that GEIS not only propose a highly qualified order entry system but also training and ongoing support, so the sales force could be more effective in selling Philips' products. GEIS proposed a system that would streamline the order process by automating the management

of order collection, order confirmation, and product availability. It would enable Philips to update price lists and gather sales statistics electronically. And it would provide electronic messaging capability between sales agents and from agents to headquarters.

TO ADDRESS THE PROBLEM OF poor post sale support, GEIS proposed that Philips build closer ties with its technical assistance centers so their customers would receive better service on products purchased from Philips. Meetings with managers of some of the centers enabled GEIS to define their needs exactly. GEIS proposed a system that would automate collection of orders for spare parts, parts distribution, collection of product guarantees, price list management, and all the administrative paperwork, such as invoices and expedition advisories, that flows between Philips and the centers. Such efficiencies would reduce the time required to secure needed parts for repairs.

The GEIS solution responds to

Philips' desire to have an open system accessible by its various constituencies (sales agents, technical assistance centers, wholesalers), a system that is easy to use, and one supported by highly reliable service. Philips also was looking for cost effectiveness and ease of use.

Using QCX, a file transfer application developed by SDC people in Turin before QCBasic was available, the solution enables the free flow of information between workstations in the offices of sales agents and technical assistance centers and Philips' back office applications.

Alternative solutions Philips considered were developing an in-house solution using their own internal network and the local PDN and proposals from Videotel and IBM, both using off-the-shelf software packages. All the alternatives would provide Philips only with basic file transfer capability, whereas the GEIS solution is an open application that gives Philips a bridge to all its constituents. (Philips is now using EDI*EXPRESS to exchange

purchase orders and invoices with its wholesale dealers.) In addition, GEIS could offer consultancy, training, and support on a global basis.

"OUR VICTORY IS DUE TO A consultancy relationship established with Philips early in the process," says Aldo Caiani, senior sales consultant, Milan. "GEIS presented itself to the client as a business partner rather than as a salesman of products. We offered consultancy on all the activities. Ours was a global solution, offering worldwide network, software applications, help desk, and training."

Using the Order Entry System, sales agents can virtually eliminate the time lapse in transmitting orders to headquarters. Headquarters can quickly process the orders because no rekeying is required. In fact, the system cuts in half the time required to process an order. And sales branch offices have immediate access to such information as price lists, new product announcements, sales promotions, client names and addresses—all updated in real time. As a result, the sales cycle has been streamlined and consequently the client is better served.

The Technical Assistance Center application enables up-to-date management and distribution of spare parts requests and automatic management of worksheets and information on failure statistics. As a result, the time customers must wait for product repair has been greatly reduced. And not only has Philips' image with its buyers improved, the company also has greatly improved relationships with the technical assistance centers.

"Establishing the partnership with Philips, understanding their business requirements, proposing our solution, and designing and developing the application was an effort shared by the entire Milan sales, marketing, and SDC staff," says Aldo Caiani. "It was a true team effort that has built a solid business partnership with this important client."

The Italian team that supports Philips, from left to right: Marco Molino, Emilio Caliendo, Aldo Cajani, and Mario Pasquali.



LET YOUR (ELECTRONIC) FINGERS DO THE WALKING

GEIS has developed an electronic order transmission system for members of the Yellow Pages Publishers Association to streamline the process of placing orders for advertising space in what has become a big business—the *Yellow Pages*.

“**L**et your fingers do the walking” is a popular phrase used in the U.S. to encourage people to use their telephone directories to find providers of goods and services. The *Yellow Pages*—the U.S. name for the telephone directory to business and professional services—is a very big business. In the United States, 6,000 directories are printed annually, all relying on local and national advertising to support them. How are these directories filled with advertising copy, which in major directories can fill thousands of pages?

In the national market, Authorized Selling Representatives, businesses that are members of the Yellow Pages Publishers Association, call upon national clients to persuade them that buying space in the *Yellow Pages* is a good use of their advertising dollars. The key to successful selling is to present a strategic plan that identifies key

markets in which the company ought to have exposure and to offer a single contract for multiple placements. Until a few years ago, this was a paper-intensive business. In that environment, once the advertising program was accepted by the client, multiple copies of the ad order were sent by mail or teletype to the dozen or more publishers in whose directories the ad was to run. Days later, when the order arrived, if the publisher had questions, he would



either call or write the ASR for clarification. In a business that has become increasingly competitive since the dismantling of AT&T, this paper-based method of doing business was no longer acceptable.

THE YELLOW PAGES PUBLISHERS Association (YPPA) is the national association whose charter is to help its members—publishers and Authorized Selling Representatives—do their jobs more effectively. YPPA was formed in 1988 to represent the industry more effectively by merging two former associations, one representing local advertisers and the other national advertisers. In 1986, the national association had determined that the time had come to swim out of the sea of paper by establishing an electronic order transmission system. From a field of ten, GE Information Services was selected to design the system and a relationship of mutual growth and development began.

The Order Transmission System designed by GEIS is an EDI-like system that enables ASRs to send standard order forms electronically to multiple publishers and to receive confirmation of receipt from those publishers. In a cyclic market like the *Yellow Pages*, with editions published annually, verification of receipt can translate into opportunity gained or lost.

"Getting the ASRs to embrace the system was more a cultural adjustment than it was a matter of learning how to use the system," says Jim Greulich, account manager. "They had to be persuaded that when they send an order off electronically, it really reaches its intended receivers."

TODAY, THANKS TO THE EFFORTS of the GEIS support team, 98 percent of all *Yellow Pages* advertising is sent and received through the GE system. The YPPA has become a firm believer in the benefits of doing business electronically, and GEIS has become its business partner in moving the association members in that direction.

One of the paper intensive activities within YPPA is the monthly publication of the industry Rates and Data publication. Each of the 6,000 *Yellow Pages* directories published annually has its own pricing structure, ranging from one line entries to full page advertisements. Every month, publishers submit changes in their pricing structure to the YPPA, which then reprints and distributes the undated pricing publication to YPPA members. As a first step to streamlining this activity, GEIS has provided a way for the publishers to send updates to the publication electronically. YPPA feeds these updates to a data base at the printing company, who then pulls down the data and reprints the publication.

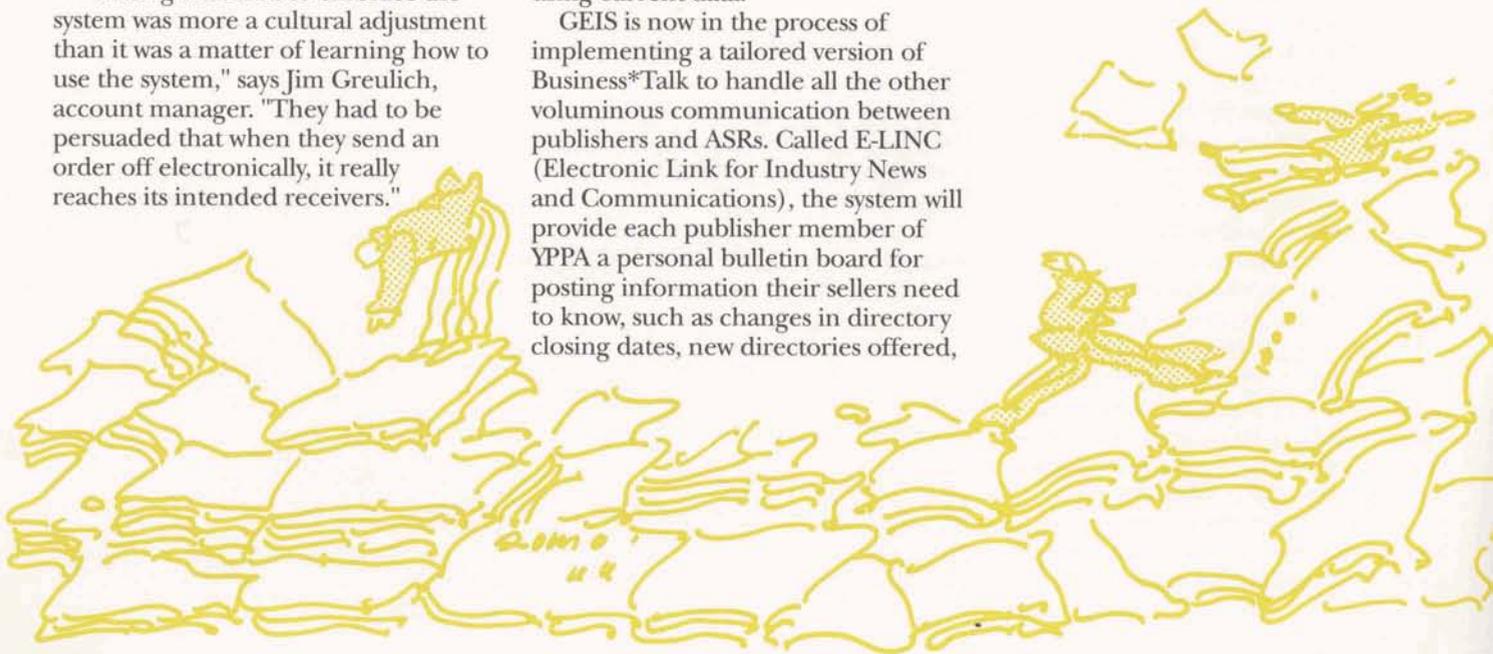
GEIS has proposed to YPPA that the data be moved to MARK III as an on-line data base to which publishers could send updates and which ASRs could access for current pricing schedules, thereby eliminating the whole printing and distribution process and ensuring that ASRs are using current data.

GEIS is now in the process of implementing a tailored version of Business*Talk to handle all the other voluminous communication between publishers and ASRs. Called E-LINC (Electronic Link for Industry News and Communications), the system will provide each publisher member of YPPA a personal bulletin board for posting information their sellers need to know, such as changes in directory closing dates, new directories offered,

and special sales promotions. GEIS views E-LINC as the foundation for all other applications for YPPA. For example, if the association accepts GEIS' proposal for an on-line price publication, GEIS will build an enter/exit feature to enable access to the publication through E-LINC.

A KEY TO THE SUCCESS GEIS is having with this client and the continued expansion of GEIS services to the association is the account team's understanding of the business. Jim Greulich and Peggy Jarolin have been working with the *Yellow Pages* since GEIS won the business in 1986. Sharon Young joined the team about a year later. They've learned the *Yellow Pages* business and have gained the confidence of the leaders in the industry. The team is now viewed as valued consultants, very much a part of the YPPA team.

"The team effort that we have with GE brings beneficial results to both YPPA and GEIS," says Marge Mucaria, vice president, National Yellow Pages Services Operations, YPPA. "Our industry has been called the 'sleeping giant of the advertising industry.' It's nice to know that as the sleeping giant emerges as a dynamic advertising force, our partnership arrangement will help our industry to be successful in reaching our goals."



BUSINESSCLIPS

GEISBreakers Strive for Excellence in Communication

Mike Hall, Client Services, took his public speaking skills to the highest level of Toastmasters International Table Top Competition by winning at the District Level. A member of GEISBreakers, the Rockville-based Toastmasters Club, Mike competed against members from 134 other clubs in his district to win the top spot.

GEISBreakers is a newly formed Toastmasters Club. According to the club's governor, Odessa Pitts-Talley, members see the club as a way to strive for "excellence in communication and leadership skills."

QuikNews Express Added to QUIK-COMM Service

To help corporate executives maintain competitive advantage in the dynamic business climate of the 1990s, GE Information Services now offers QuikNews Express, a personalized electronic news clipping service integrated into the QUIK-COMM Service.

QuikNews Express enables a subscriber to establish a profile of key words of interest and to specify news items on particular topics, such as leading stock market indicators, that a user wants to receive regularly. The QuikNews Express application receives news feeds throughout the day from leading information providers worldwide.

As news articles are received, they are checked against the profiles of subscribers. Stories that match a subscriber's profile are packaged as a QUIK-COMM message and delivered to the subscriber's electronic mailbox.

QuikNews Express collects information from internationally respected news wires: United Press International (UPI), Agence France Presse, Deutsche Press-Agentur, Agencia EFE (Spain), TASS, Kyodo News Service (Japan), Xinhua News Agency (China), BusinessWire, PR Newswire, Newsbytes News Network (computers and

electronics). QuikNews also collects information from the Securities and Exchange Commission.

QuikNews Express is the first of a series of QuikNews Service subscription options targeted to meet the information needs of the corporate user. The next service, the QuikNews Newsletter, will be released soon. The newsletter will provide current business news summaries in telecommunications and micro-computing, compiled from a sweep of more than 500 information sources. News summaries are delivered to subscribers in concise two to four page newsletters.

Automotive Team Member Recognized by the Industry

Karen McNeal, senior EDI consultant, was selected by the Automotive Industry Action Group (AIAG) to receive a 1990 AIAG Outstanding Achievement Award for her contribution and leadership on behalf of AIAG and the North American automotive industry. Recipients of this award are nominated by their peers for exhibiting exceptional commitment and dedication to promoting the

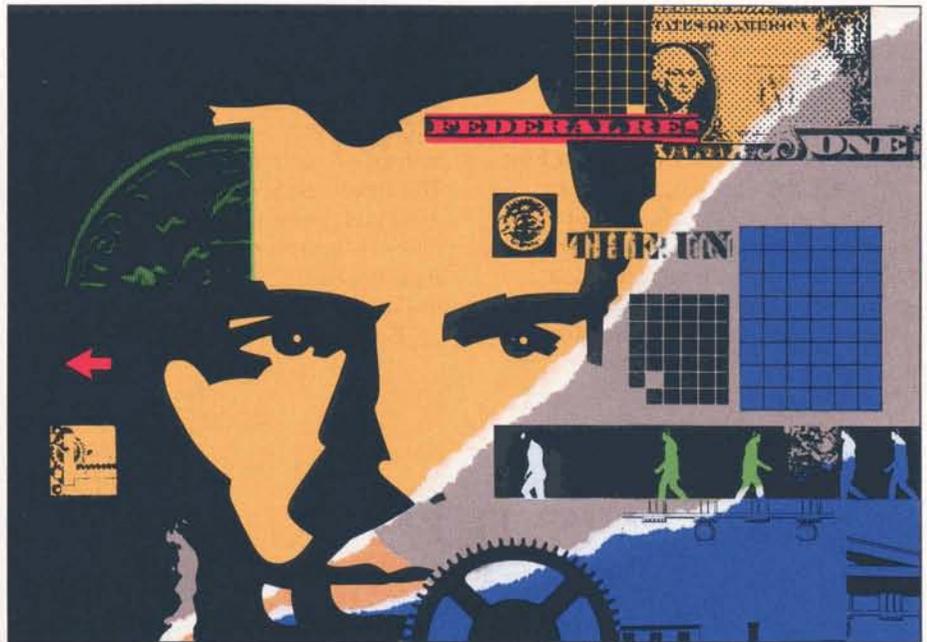
ideals of AIAG. AIAG's primary goal is to make the automotive industry more productive. The group recognizes that EDI is a major productivity tool for the industry.

"It's really quite an honor for me to be selected for this award," says Karen. "Recipients are usually from within the automotive industry. It's nice to know that I am viewed as an insider."

Karen has represented GE Information Services at AIAG since 1985. She now represents corporate GE as well, sharing information and industry trends with such other GE components as Plastics, Lighting, and Corporate Information Technology, all of which have a deep interest in the automotive industry.

Karen participates in various AIAG activities, including the Truck Advisory Group, which comprises all the U.S. heavy truck manufacturers and their major suppliers.

"My primary goals have been to provide GEIS with excellent visibility and to further the use of EDI within the automotive and heavy truck industries," says Karen. "An excellent selling tool is to show the industry members that GEIS has an in-depth knowledge of their industry and has the best EDI service as well."



GEIS Extends Network Into East Germany

GE Information Services has installed a network node in East Berlin and by the end of the year plans to have nodes installed in three other cities in East Germany: Dresden, Leipzig, and Chemnitz. Since the unification efforts began, demand has grown significantly from the West

German government and corporate entities to have access to information on East German companies, branch offices, and markets.

GEIS clients who are accessing the network from East Berlin include Handelsblatt, Sueddeutsche Zeitung, and Axel Springer Verlag. The network access requirements of banking and manufacturing clients of GEIS located in East Germany are also being served.

"Being represented with access nodes

in East Germany for us is not only a question of future business opportunities," says Gerd Eickers, manager, Central Europe. "With requests from our clients for this service, it has become a matter of staying in business. We are happy that we could surpass our competition and will do our best to do so in the future."

Network expansion into East Germany is the first step toward possible expansion into other countries in Eastern Europe.

NEW&REVISED DOCUMENTATION

Here are 40 documents published or revised in September and October. Publication numbers followed by letters indicate revisions. Copies of these publications can be secured by using the On-Line Ordering System (OLOS).

Core Systems and Network Publications

3503.06	Security Reference Manual
3920.25	Managing Global Information Systems For Today's Financial Services Community Brochure.
3950.11-1	Network Capabilities Technical Information Sheet: Asynchronous Services.
3950.11-3	Network Capabilities Technical Information Sheet: X.25 Services

Business Communications Publications

3410.100B	Personal Computer Mailbox Profile
3410.110-1D	QUIK-COMM System Services U.S. Price Schedule
3410.160	QuikNews Express Profile
3410.165	World of Business Communications Presentation Package
3410.168	GE Mail Service (GEMS) 2000 U.S. Price Schedule
3410.176	Connecting the World Product Profile
3410.177	QuikNews Newsletter Product Profile
3411.19-1	PC Mailbox Version 5.0 User's Guide
3411.19-2	PC Mailbox Version 5.0 Quick Reference
3411.21	The QUIK-COMM System Implementor's Guide
3412.14-2	Network Courier LAN Connector, Installation and Administration Guide
3412.15	Network Courier LAN Connector Profile
3412.16	MHS LAN Connector Profile
3412.17-1	MHS LAN Connector User's Guide
3412.19	CompleE-MAIL/MHS LAN Connector Profile

EDI-Oriented Publications

902.114	Chemical Boosting EDI Capability, Reprinted from American Banker
902.115	EDI early notice can give preview of coming payments, Reprinted from Corporate Cashflow

EDI-Oriented Publications

902.116	J. C. Penney, Pioneering EDI, Reprinted from ID Systems
5070.81-5	EDI*UPDATE Newsletter, October 1990
5070.126C	EDI*PC Teletraining Guide
5070.134	EDI Flyer
5073.06-1A	EDI*CENTRAL Software System License Data Sheet

Industry-Oriented Publications

5076.03A	UPC*EXPRESS Catalog User's Guide
5076.11	UPC*EXPRESS Catalog Quick Reference Guide
5214.15	Equipment Management System Description
6214.06-9	Check Stub Data Exchange (CDEX) Profile
6214.10A	Program Schedule CODE*PC Program
6214.12-1	Petroleum Data Exchange Services, Check Stub Data Exchange (CDEX) User's Guide

Other Publications.

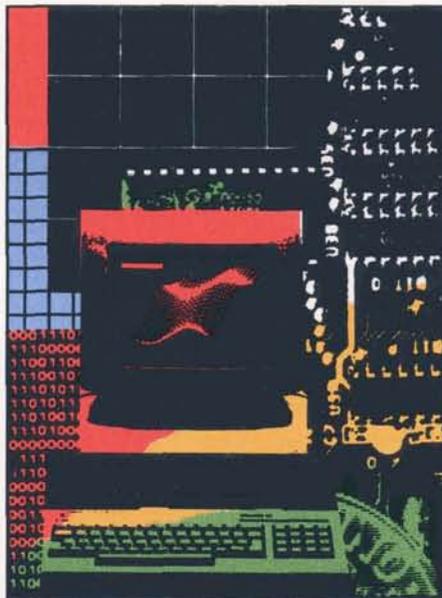
401.01E	OLOS User's Guide
0000.62	Guidelines for Software Life Cycle Management Reference Manual
1401.01U	GE Information Services Access Directory, October-December 1990
6500.11-1	Worldwide Client Services EDI Front Desk Brochure
6500.11-2	Worldwide Client Services Support Brochure
6500.11-5	Worldwide Client Services EDI Support Brochure
6500.11-10	Worldwide Client Services Network Support Brochure
6500.11-12	Worldwide Client Services Client Quality Brochure

INDUSTRY BRIEFS

SWIFT, the networking cooperative of 2,000 banks worldwide, is moving into new competitive service sectors as it claims a contract to provide the network for an emerging European foreign exchange system. The contract is expected to be awarded by the Exchange Clearing House Organization (ECHO), a group of 25 European banks building a common clearing house for European foreign exchange. ECHO would establish the first multi-lateral foreign exchange settlement system in the world by 1992. But the ECHO contract is just one facet of SWIFT's broad mandate to generate new services to thwart mounting competition. According to officials, the Society for Worldwide Interbank Financial Telecommunications hopes to draw corporate customers of the society's member banks onto its network to boost traffic. SWIFT also intends to move into the market for managed data network services. A recent decision to use the EDIFACT standard for EDI signals its entry into a broader range of value added network services.

US Sprint announced it will market EDI systems to large-scale network service users worldwide. According to Sprint, the system's integrated EDI translation software will make it easier for major corporations to implement a dedicated EDI system with their outside suppliers who use PCs. The EDI system also can be used by Post Telephone and Telegraph (PTT) administrations to offer public EDI services in their countries as they use US Sprint Telenet data network systems to provide their own public network services. The US Sprint EDI system supports all major EDI protocols and interconnections to mainframe, mini, and personal computers.

Infonet will serve as the public data network for worldwide users of the TradeRef database application developed by the Legal Information Systems and Technologies (LIST) Foundation in Vancouver, Canada. LIST's TradeRef



database provides current information on international customs regulations. It is designed to help customs officers, customs brokers, exporters, importers, trade consultants, commercial law firms, and freight forwarders throughout the world. Infonet will connect interested parties worldwide to a mainframe computer at Westbridge Computer Corporation in the U.S. to access the TradeRef database.

Andersen Consulting has signed a ten-year, \$200 million systems management contract with Sun Refining and Marketing Co. Andersen Consulting will provide computer processing and network services to Sun R&M and its affiliates. As part of the agreement, Andersen acquired Sun R&M's Dallas Computer Center and has retained 66 of its data processing, system software, and telecommunications professionals.

Stratus Computer Inc. announced that Kmart Corp, the world's largest retailer, and The Office Club Inc., the largest office products retailer in the Western United States, have chosen Stratus XA2000 Continuous Processing Systems to run on-line software applications aimed at lowering their operating

costs and improving customer service. Kmart has begun using Stratus to run distribution center order processing and credit card authorization. Store data collection and distribution are scheduled to go on-line next year. Office Club plans to run sales data collection and credit card authorization on Stratus by mid-1991. These announcements mark Stratus' aggressive expansion into the retail and distribution markets.

United Airline has announced that effective November 1, it will implement United Cargo Plus I, a new cargo computer system that will provide freight forwarders worldwide with real time access to United's cargo computer systems. The United Cargo Plus I system will provide shippers with a wide variety of functions, such as cargo space availability, shipment reservations, shipment tracking, and flight information.

Reuters Holdings has signed a new marketing agreement with Effix Systems of Paris for the worldwide distribution of Effix's application software for the trading room. The new agreement gives Reuters exclusive rights to market a suite of Effix products, including intelligent workstations, as part of Reuters Triarch 2000, already one of the world's leading digital trading room systems, with over 115 sites installed. The Effix workstation provides advanced facilities for the trader in today's volatile and unpredictable markets. Besides displaying information in an unlimited variety of formats, the software allows the user to plot graphs, run real-time updating spreadsheets, manage news alerts, and create personalized montage displays.

Andersen Consulting has signed up its first Canadian outsourcing contract, a \$5 million deal to take over the entire information systems operation of Marsulex, Inc., a manufacturer of sulfuric chemicals. Marsulex, a \$160 million company, is the first customer at Andersen's new \$23 million data center in Toronto.

British Telecom has integrated its value added network services into one package, called Global Network Services. GNS is designed to provide one stop shopping for companies with international networking requirements. Management centers will be provided in 20 countries covering Europe, the U.S., and the Far East via BT Tymnet network nodes. In 34 other countries,

where the public data network is based on Tymnet technology, enhanced gateways enabling services similar to those of GNS will be available. In addition, GNS will interconnect with Network Information Service, a Japanese public packet switching network that connects 35 cities and with Infolink, Australia's largest value added data network.

The Open Software Foundation has introduced a key component of its distributed operating environment with the first release of the OSF/1 operating system. OSF/1's innovative, extensible architecture incorporates advanced technologies while supporting industry standards and maintaining compatibility with existing systems. It offers more features and better security levels than other popular multi-user operating systems available today.

MILESTONES

Congratulations to the following employees who have celebrated service anniversaries with GE during the third quarter of 1990.

YEARS

40

Warner Sinback, U.S.

YEARS

25

Bill Brill, U.S.

Bob Donnestad, U.S.

Doyle Eckelbarger, U.S.

Charles Fowler, U.S.

Jan Geerlings, The Netherlands

Richard Lerz, U.S.

Fred Rijnhout, The Netherlands

Warren West, U.S.

YEARS

30

Felix Dupont, U.S.

Bill Kerr, U.S.

Guus Polhuis, The Netherlands

David Vernet, U.S.

John Jamieson, U.S.

Gregory Kappa, U.S.

Robert Stolzenburg, U.S.

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