

**“We rely on GE as
the communications
experts”**

The Power to Compete

Meeting the Telecommunications Challenge with GE Information Services

Maintaining the competitive edge: how to leverage the power of state of the art telecommunications and modern Electronic Data Interchange (EDI) while accommodating an installed base of diverse equipment and varied communications interfaces? GE Information Services has met this challenge successfully for dozens of forward-looking companies. One of them is Boise Cascade Office Products, which turned to GE's telecommunications network and IBM* compatible processing power to solve their order processing communications needs.

Bringing it all together...

Boise Cascade Office Products is one of the largest wholesale and retail distributors of office supplies and furniture in the U.S., with over 19,000 items in its catalog. Approximately half of their business is direct to end users and the remainder is through office supply dealers. Boise Cascade wanted to upgrade its order transmission and acknowledgment system by accommodating several types of orders through a single IBM

Systems Network Architecture (SNA) connection into their order processing application. Order types included EDI, private format file transfers, and several line by line order entry systems. The systems used different hardware and communication interfaces, and had varying response time requirements.

Packaging flexibility and power...

Boise turned to GE Information Services for GE's flexibility and strength in EDI, GE's networking interfaces, and above all GE's ability to package a variety of telecommunications capabilities in a single integrated solution. Using GE's IBM processors and SNA Network Interconnection (SNI), Boise could leverage GE's network and EDI capabilities while simplifying their communications interfaces. "The GE Network let us get our system in operation much more quickly than we could have on our own," said Carole Bernstein, Boise Cascade Marketing Systems Manager. "We rely on GE as the communications experts," she added. ►

* IBM is a registered trademark of the International Business Machines Corporation.



GE Information Services



GE Information Services is the world's largest third party supplier of EDI services and has the world's largest commercially available network, available locally in 750 cities, 24 hours a day, 365 days a year. "After talking to our users, we were convinced that GE is the most frequently used and broadest based network for EDI," said Larry Miller, Boise Cascade Marketing Manager. GE combines flexible telecommunications alternatives and powerful central processors to make tough integration problems look easy.

Client Benefits

Boise Cascade not only reduced their own maintenance and support overhead: Boise customers realized even greater savings. For example, avoiding the cost of rekeying orders is alone worth millions of dollars per year. "Our customers came to us. As more of them automate their order processing, the value of computer to computer interfaces is greater than ever," said Mr. Miller. The GE solution uses state of the art telecommunications while allowing sys-

tem users to retain their existing hardware and procedures. GE's single solution accommodates both batch and on-line order entry while providing an added security buffer for Boise Cascade's system.

For Boise Cascade and other businesses faced with telecommunications challenges, GE Information Services offers unmatched flexibility and power. GE offers a wide range of network based services, including:

- Electronic Mail
- Dealer Communications
- Sales Force Automation
- Banking and Financial Systems
- Order Fulfillment
- Electronic Data Interchange

For more information, please contact your GE Information Services representative or write:

GE Information Services
401 N. Washington St., MNB2D
Rockville, MD 20850
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GE Information Services



\$\$\$\$ Success Story #19 \$\$\$\$ Helping the Client Compete

Banque Nationale de Paris (BNP)

PROPRIETARY - FOR GE INFORMATION SERVICES EMPLOYEES ONLY

The Client

Banque Nationale de Paris is the largest French bank. BNP was formed in 1966 from the consolidation of two major French banks - Comptoir National d'Escompte de Paris (CNEP) and Banque National pour le Commerce e l'Industrie (BNCI). CNEP had been founded in 1848 and was oriented toward serving large companies. BNCI, established in 1932, was focused toward serving the needs of small-to medium size companies.

Because of CNEP and BNCI's complementary networks, BNP agencies are spread throughout European and American countries, as well as in African, Eastern, and Far Eastern nations - with total coverage of 76 countries. Through its 2030 agencies in France and 367 agencies in foreign countries, BNP employs almost 60,000 people (80% in France). BNP manages roughly 735,000 company accounts, and 3.5 million private accounts. In 1985, BNP ranked as the sixth largest bank worldwide.

BNP's commercial dynamics and strength flows from three basic principles:

- to be capable of doing everything in the banking business,
- to be present everywhere, and
- to adapt strategy within market segments.

Business Requirements

In the 1970's, BNP focused on improving efficiency and developed a strategy to remain competitive that is summarized as: *being competitive means*

innovation and adaptation. At the time, banks were transmitting paper financial statements to their clients. Therefore, in order to increase its market share, BNP decided to offer a full set of teleprocessing services - initially to companies, then later to private customers.

Alternative Solutions

BNP determined that the required teleprocessing services could be delivered in two possible ways: through an in-house solution or via an external service company.

BNP considered in-house alternatives, but rejected a total in-house solution for the following major reasons:

Data Security: With a BNP in-house solution that might not have the layers of security provided by a service company, customers would be given potential access to BNP internal data files and potential access to other customers' data. BNP determined that this represented an unacceptable risk.

Client Support: The BNP Technical Customer Relationships Department (DORTC) was composed of a small team (5 to 9 people). BNP determined that DORTC would not be able to fully support the new service they envisioned, yet they did not want to significantly grow the department.

Teleprocessing Resources: Without any reference in the banking market, it was difficult to size the demand for this type of service. There-

fore, BNP determined that accurate resource allocation would be difficult and that there was a high risk of underestimating or overestimating the resources required.

BNP then turned its attention toward evaluating external service providers. Because of BNP's market segmentation, three levels of service were to be offered:

- LOW = domestic, small/medium companies
- MEDIUM = domestic, large companies
- HIGH = international companies

BNP selected a provider for each level based upon criteria such as: network availability, prior experience, data security and costs.

Why GEIS?

Because of our previous experiences with BNP, and other French banks, GE Information Services was awarded the domestic portion, while one of our competitors (ADP) was awarded the international service portion.

The GE Information Services Solution

BNP named their new teleprocessing-based service MADIC - Mise A Disposition d'écritures Comptables (or, accounting statement availability). After a one month GEIS implementation effort, BNP was able to begin commercially offering MADIC in 1980. Oriented toward businesses, the service initially included the following functions:

- On-line Inquiry - against all or part of a company's accounts; review of all single movements or extract summary, review by type of operations.
- File Transfer - on the company treasurer's request, account statements are electronically transferred.

The data flow for the service was structured as follows:

All data is centralized from BNP agencies into the BNP central computer located in Marne-la-Vallée (Paris suburb). Each evening, the BNP central computer connects to the GE Information Services network/MARK III® Service and sends the customer data at rates varying from 2400 to 9600 BPS (synchronous). Transmission time is approximately 30 minutes (1986).

Customers can call MARK III MADIC service from a terminal to initiate on-line inquiry, at rates varying from 50 to 1200 BPS (asynchronous). Customer computer systems can connect to MARK III MADIC service and download their data file at high speed rates.

If a company's information isn't inquired-against or downloaded, the data is kept by MARK III Service and then combined with the new data uploaded by BNP the following evening. Up to 30 daily statements can be stored this way.

MADIC Evolution

Since the initial implementation in 1980, there have been numerous MADIC enhancements. The major ones are:

In order to capitalize on the developing national interest for MINITEL Services, BNP asked GEIS to provide Videotext access for MADIC subscribers. A two month effort was required, primarily to develop the special Videotext character interface. The addition of Videotext access in 1982 was a key element in the increase of MADIC subscriptions from 150 to 350 that year.

In 1983, MADIC Release 2 was implemented. This new release was a major evolution of MADIC service and required 3 months to implement. Specifically, MADIC sequential-access method was abandoned and files were organized as HISAM data bases. Several other technical improvements were made that resulted in a reduction of line-connection faults and an average hour cost reduction of 37%. In addition, a Currency Information Service was

added to MADIC, as a complementary function. Information from the BNP Exchange Room such as currency exchange rates (prime, at term), lending rates, and exchange comments was made available to MADIC subscribers for online consultation.

In 1984, BNP decided to offer a significantly lower cost/less functional version of the service to their small/medium company market segment. GEIS lost this portion of the subscriber base to another service provider (Telesystemes). However, GEIS continued to grow use of our service by adding a new related service for BNP - Country Information Service. This enhancement reflected BNP's desire to expand their teleprocessing services to "other types of customers." Although attached to MADIC, this new service has a distinct subscriber base (20 users as of 1986). Oriented toward company Finance Managers and Export Departments, the service supports risk analysis by providing access to a database of general, economic, trade, BNP network, currency exchange, and flash news information for 90 countries.

In 1986, a major service addition, called MULTI-B (Multi-Bank Account Service), was implemented. MULTI-B functions and features are similar to MADIC, but with this new service, a company can centrally access their accounts from multiple banks (not just BNP). Ten banks participated in the pilot phase, and many others are entering the "pool."

Late in 1987, MADIC clients were moved to the MULTI-B environment. The development and implementation effort for this transition included extensive use of FCM/F77 capabilities and resulted in PSA revenue of approximately \$135K (US).

When MADIC was first implemented, a customer connect hour was approximately FF*1,300/hour. Even with the addition of new MADIC features over the years, GEIS has improved price performance since the initial implementation and a customer connect hour is now approximately FF*850/hour. In 1987, GEIS MPR revenues for

BNP were over 1.3 million FF. And, the transition to the MULTI-B environment is expected to have a very positive impact on future revenues. [Note: 5.5 FF = \$1 US].

Continuing Growth

GEIS is experiencing continuing growth for the BNP account. In particular, because the ADP network is inadequate to address BNP worldwide goals, we see future extension of our BNP service on an international basis. For example:

- A GEIS developed international cash management balance reporting system (BRI) is replacing an older system on the ADP network for BNP - full ramp is expected in 1988.
- Discussions are currently under way with BNP for a worldwide Money Transfer System.
- BNP has signed a "Cats" license for a Documentary Credit system to be used by its branches in France and abroad.
- A BNP Videotext-based cash management system running on Telesystemes is being transitioned to GEIS. This application, call Telegestion-B, is one of the largest GEIS service applications for BNP.

Client Benefits

BNP anticipated that MADIC would assist them in growing market share. While it is difficult to measure the impact of such a service, MADIC experienced a prompt and growing demand:

- Within the first 18 months of service, 150 companies subscribed.
- Today, thousands of companies subscribe to the service (with hundreds of the large corporation subscribers using "GEIS - MADIC").

In addition, BNP's strategy has been to make a profit from their teleprocessing-based services.

Total MADIC usage is billed by GEIS to BNP, and BNP in turn charges its MADIC subscribers – to facilitate charge back, GEIS gives BNP detailed usage information on a MADIC client basis. MADIC subscribers pay BNP for their own usage plus an additional charge.

The Winning Team

Today, GE Information Services is BNP's preferred supplier for all client applications. The team from Charles Fodor's organization responsible for the BNP account are: Genevieve Fabre Abbas,

Banking district manager; Jean Louis Previdi, SDC manager, Andre Boico, SDC project manager, Jean Michel Esnault and Alain Longatteli, SDC project leaders; and Francois Divan, Technical Representative.

More Information

For additional information about the BNP applications, Andre Boico (QC=BOICO) can be contacted. For information on the Transport Program, contact SDC Programs, QC = SDCADMIN or call 8*279-5585.



USA

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\$\$\$ Success Story #18 \$\$\$ **Healthy Profits**

PIMMS-Pfizer® International Medical Management System

PROPRIETARY - FOR GE INFORMATION SERVICES EMPLOYEES ONLY

The Client

Pfizer International, headquartered in New York City, is a major pharmaceutical firm with \$4.5 billion in sales. While over 60% of sales are currently derived from their Health Care segment, Pfizer also has major businesses in the areas of agriculture, specialty chemicals, consumer products and Materials Science. Sales are currently increasing in all business segments with the money makers in pharmaceuticals identified as Feldene, Procardia, Minipress, Cefobid, and Glucotrol. Pfizer has an international presence in approximately 30 foreign markets with no single country contributing more than 9% of consolidated net sales.

Business Requirements

Pfizer International Medical Division has the need to effectively manage and distribute the many sources of international medical information available in their firm. Pfizer believes that the ability to collect and report data regarding clinical trials, registration tracking, formulary components, adverse drug reactions, and product treatment is critical to the competitive success of their business. While this information is centrally managed by their corporate headquarters group in New York City, real time access to the information is also needed in their main off-shore markets. Pfizer also has the requirement to respond quickly to government inquiries, and thus the headquarters group must effectively manage accountability of product information on an international basis.

Pfizer determined that they required a complete internal system that would allow Pfizer International to integrate all their medical components into a unified reporting system. The system would allow them to make more informed, timely business decisions and improve their competitive edge in bringing new products to market.

Alternative Solutions

Pfizer was already using GE Information Services for an international file transport system, and our representatives had established an excellent rapport with the client. In fact, that relationship served as a disincentive for the client to seriously consider other vendor alternatives. Pfizer International did, however, consult with several vendors about the proposed new information management system, but were not satisfied with the total integration available in these systems. They needed a system that would not only address the required needs of today, but one that would be flexible enough to move in new directions in the organization. They recognized that if they could build a system that worked for the international medical market, other departments (e.g., manufacturing or sales reporting) would soon follow.

A limited amount of Pfizer in-house processing was available, but the international group did not have the systems support personnel to devote to the project. Also, distributing the application to their off-shore markets would require additional personnel at the foreign locations.

Why GE?

GE Information Services offered a total integrated solution to the client. With our BusinessTalk[®] product, we could easily provide three of the basics that were needed for their information management system:

- electronic mail
- bulletin boards
- textual search and keyword retrieval

In addition, our SDC personnel could engineer a seamless custom extension to BusinessTalk to include the hierarchical data base capability required for registration tracking and clinical trials.

The GE Information Services international network reach and international SDC presence were critical in convincing the client that we could implement a customized system that would meet their needs. A key point in selling this system was our ability to have a local SDC representative install the Pfizer International Medical Management System (PIMMS) software in each of the eight Pfizer foreign locations. After each local GE representative ironed out any communications problems with our generic dialogue files, the Pfizer New York PIMMS representative visited each location to demonstrate the system functions and instruct users in its usage. This allowed our client to concentrate on using PIMMS, rather than having to worry about MARK III[®] Service network connection requirements for each country. Also, this approach provides Pfizer (and GEIS) the benefit of ramping the application quickly, as new users could be trained in a more timely fashion.

GE Information Services Solution

The GE Information Services custom-built solution, PIMMS, is a PC and MARK III Service-based system that uses the native capabilities of BusinessTalk, and uses BusinessTalk extensions to interface to a number of MARK III applications. HISAM was used to engineer both the Registration Tracking Database and the Clinical Trials Database custom applications on MARK III Service. The BusinessTalk Application Selector (BTAS) was used

to provide a seamless interface to a suite of PC front-end "C" programs for the custom applications.

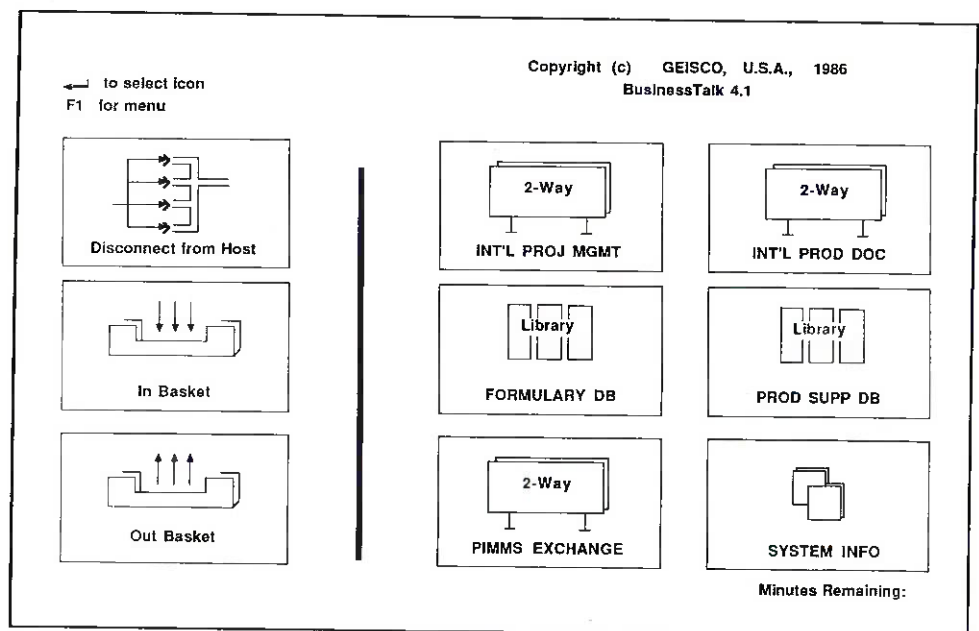
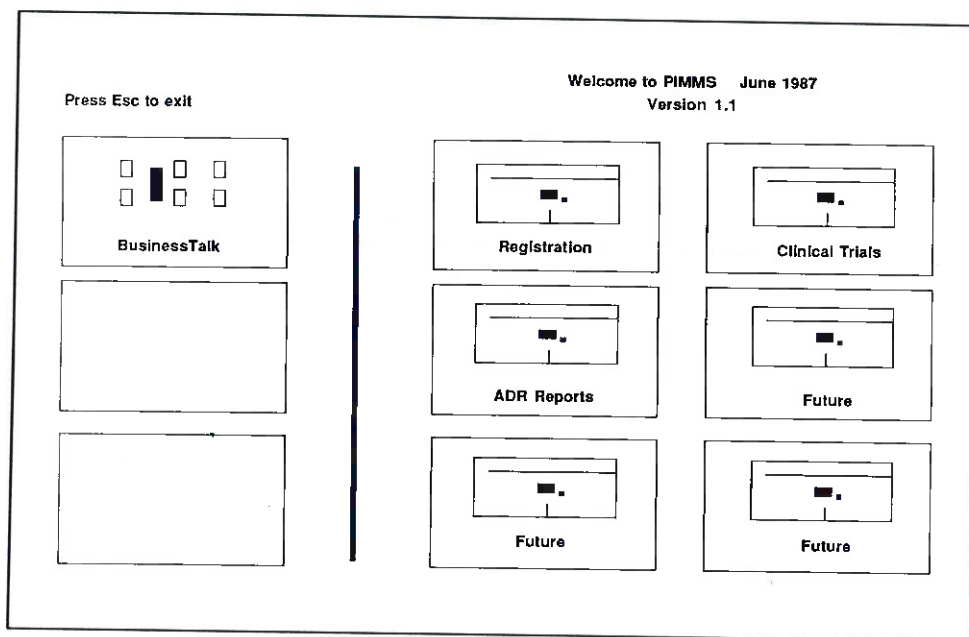
The resultant PIMMS application allows international users in Pfizer to gain access to pertinent medical information to perform:

- **Keyword retrieval queries on a Formulary Database** – providing information about the components of a given drug, including launch date, dosage form, target selling markets, etc.
- **On-line creation/updating and reporting of both US and foreign country Clinical Trials status information** – providing Pfizer with copy on successful clinical trial studies for their ads directed at the medical community.
- **Distribution via bulletin board of key International Product Documents** – allowing New York headquarters to distribute position papers to all its markets to be used in preparing country brochures for a given product.
- **On-line creation/updating of a Registration Tracking System** – providing critical information and status on approval procedures to sell a given drug in the various markets.
- **Distribution of schedules from an internal project management system to all markets.**
- **Ad-hoc reporting back of Clinical Trial and Registration Tracking data from HISAM data bases to the PIMMS in-basket.**
- **A general 2-way exchange bulletin board for all PIMMS users.**

The PIMMS application was developed, tested, and implemented over a one year period. The custom portion of the development took approximately 3 person months. PSA for the original BusinessTalk development was \$20k, with enhancements during the year totaling an additional \$70K, plus \$10K for New York headquarters training.

PIMMS was released in pilot phase on September 22, 1987. It is now installed in 8 pilot countries with an additional 22 planned by the end of first quarter 1988. MPR for October 1987 was \$27K and it is expected that MPR at full ramp of 30 markets will be \$40K. In addition, this application has given GE

Information Services tremendous credibility in the Pfizer organization and has generated a 1988 order for a similar catalog in the manufacturing group. It has also generated solid leads in several other unrelated departments.



Client Benefits

Both the Pfizer international headquarters staff and the country components will benefit from PIMMS.

- The headquarters staff will be able to quickly extract information about registration tracking and clinical trials, to satisfy both upper management and governmental requirements.
- The country representatives will not only have an effective way of maintaining their New York-sponsored studies, but will also have the ability to "experiment" with PIMMS for benefits in their local environment.
- The country representatives will be able to obtain a clearer picture of just where their products stand in relation to other markets.
- Both staff and components will have a consistent and timely means of communicating important mail information and exchanging bulletin board notice information.

Overall, the system will enable the Pfizer International team to more quickly and effectively bring new products to the marketplace. The VP of the Interna-

tional Medical Division recently noted that Pfizer's delivery of a product 2 to 3 months earlier than their competitor could make a difference of \$10-15 million in Pfizer revenues for that drug.

The Winning Team

The account representative for Pfizer International is Howard Weidberg of Izy Franco's New York Commercial Sales Region. The SDC project manager of the PIMMS application is Mark Balawejder. Other key New York SDC contributors on the project are Efrain Cubides, John Welch and Armando Garcia. International PIMMS installations were supported by Detlef Schulte Strathaus of Germany, Tai Kubo of Japan, Hans Bradenberger of Switzerland, Richard Sargeant of Netherlands, Marta Gonzalez of Spain, Jacques Vermeire of Belgium, Brian Burrows in Canada and Albert Marouani of France.

More Information

For more information about the Pfizer application, or for information about solutions available through the Transport Program, please contact SDC Programs, QC=SDCADMIN or call 8*279-5585.



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\$\$\$\$ Success Story #17 \$\$\$\$ **Order Processing Communications Link**

Beating IBM* at Their Own Game

PROPRIETARY - FOR GE INFORMATION SERVICES EMPLOYEES ONLY

Business Problem

Boise Cascade Office Products (BCOP), a subdivision of Boise Cascade Corporation, is one of the largest wholesale and retail distributors of office supplies and furniture in the U.S., with over 19,000 items in its catalog and annual revenues of approximately \$1 billion. Approximately half of BCOP's business is direct to other corporations and the remainder is through office supply dealers. BCOP wanted to upgrade its order transmission and acknowledgement system by accommodating several types of orders through an SNA connection. Order types included EDI and private format file transfers (COMLINK) as well as VAN traffic (with protocol conversion) for several existing line by line order entry systems. In addition to varying communication interfaces, the systems had different response time requirements. BCOP's objective was to establish a single link to their CICS application running on an IBM*3090.

Alternative Solutions Considered

Boise Cascade had attempted an in-house in-WATS solution but it met with limited success due mainly to the small size of their MIS staff, security concerns and the difficulty and expense of dealing with peak usage. IBM Information Network Service was also considered.

Why GE?

Boise Cascade turned to GE due to our flexibility and strength in EDI which they believed could not be matched by IBM. In addition, BCOP had released

several RFPs for various services, and GE brought the interested pes from BCOP's MIS and marketing groups together to consider the advantages of a GE "package" solution. GE met IBM's price while offering the integrated approach to service capabilities.

The GE Information Services' Solution

The GE Information Services' team initially considered a MARK III* Service approach due to the EDI*Express* interface, but this solution could not meet the acknowledgement turnaround and SNA connectivity requirements. We therefore proposed an SNA Interface (SNI) solution through MARK 3000* Service. A CICS application on MARK 3000 Service provides an on-line LU6.2 interface for COMLINK, and Network Job Entry (NJE) is used for batching orders from EDI*Express. DSXMIT2 is used for transmitting EDI data between MARK 3000 Service and EDI*Express.

Boise Cascade clients can access COMLINK through MARK 3000 Service using asynchronous TTY up to 2400 bps or 2780/3780 BSC emulation as an RJE device for job submission to JES2. They also use the SNI link to pass through 3270 traffic for inquiries into a CICS application, and plans are to have TeleVideo* users of other applications use SIM3270* over the same connection.

* IBM is a registered trademark of the International Business Machines corporation; MARK III is a registered trademark of GE Information Services; TeleVideo is a registered trademark of TeleVideo Systems, Inc.; SIM3270 is a registered trademark of SIMWARE, Inc.; MARK 3000 and EDI Express are trademarks of GE Information Services.

Order acknowledgements for COMLINK users are normally returned to users during the same online session through their MARK 3000 "mailbox." If the GE/BCOP link is down or the BCOP host unavailable, orders are held for deferred transmission.

The system provides an efficient method of storing messages together with mailboxing capabilities, including automatic delivery and acknowledgement processing. A GE "envelope" is used with each transmission to identify the sender, an approach which will accommodate additional hosts if needed. The GE Information Services recovery system tracks all transactions.

Client Benefits

The GE solution provided Boise Cascade and its customers with a more cost-effective order processing system. The communications interfaces for their host are consolidated to a single link, reducing maintenance and support overhead. BCOP's customers also realize significant savings. For example, the "line by line" order entry required by COMLINK meant rekeying data which was already in on-line files. The cost of rekeying alone was

between \$10 and \$20 million per year. The in-house solution would have cost \$1-2 million a year, and require a year of development, while GE's approach costs less than \$1 million annually and was pilot tested in a few months.

The Winning Team

The Account Representative is Dan Wecker from Barbara Cresswell's Midwest Region. The SDC project manager is Rich Loesch from Silvio Anichini's SDC organization. Technical assistance was provided by Benham Malcolm, Sam Park and Paul Orrison from John Summerville's IBM Technical Center.

More Information

The technical solution used for Boise Cascade has been packaged for reuse as "Open Net" by the IBM Technical Center. Information on adaptation or reuse of this application in other prospect situations is available through the Transport Program. Contact SDC Programs, QC "MACE", or call 8*279-5585.



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**GENERAL ELECTRIC
INFORMATION SERVICES**

U.S.A.

General Electric Information Services Company, U.S.A.

401 N. Washington Street, Rockville, Maryland 20850 (301) 340-4000

January 15, 1988

TO: U.S. Sales and Services Personnel

SUBJECT: Sales Success Story #15

The fifteenth Sales Success Story is on the Cooper Companies and illustrates how a current client's business needs and problems can be improved. "IMPROVED ACCURACY WITH LESS SUPPORT" is the result of a team effort of applying a previously developed tool to solve the problems of a current system.

The Cooper Companies is a major pharmaceutical company with worldwide affiliates. They are constantly reviewing their methods and systems for exchanging financial information between their affiliates. GE was in a unique position to review these systems and provide an effective solution.

Your contributions to the Transport Program continue to make it one of the best resources for new ideas. A complete inventory of solutions is available in the InfoTalk Products & Services bulletin board; sales success stories are in the Sales Successes bulletin board; and technical profiles are available in the Transport Library data base. I encourage you to use the Transport Program, contribute to it, and let us know how we can improve it to help you find an effective solution to your client opportunities!

Best Regards,

Doug Hurley
SDC Program Manager

\$\$\$ Success Story # 15,
 \$\$\$ Attach Interface Program

\$\$\$
 \$\$\$
 \$\$\$

\$\$ Improved Accuracy With Less Support \$\$

Company Description

The Cooper Companies, headquartered in Palo Alto, California, is a pharmaceutical company with major emphasis on eye care products. They have affiliates around the world who are responsible for manufacturing lens, solutions, surgical and diagnostic equipment, as well as Revo sunglasses. Locations include France, Germany, Japan, Belgium, Spain, Italy, UK, Singapore, Canada, Taiwan and Finland. Individual affiliates are required to send quarterly and monthly financial information into Palo Alto headquarters for consolidation.

Business Problem

Several years ago, GE developed a custom financial reporting system in dBASE III using TSI to interface to MARK III Service. While this solution was in response to the client needs at the time it was developed, the lack of error-free transmission over the years has caused the client to invest increased personnel and trouble-shooting resources to support the system worldwide. Since the transmissions were not error-free, difficulties were often encountered at the month-end financial reporting close, and Cooper support personnel were often involved in trouble-shooting the system on a monthly basis. The client was also using PC

MailBox 3.0 to facilitate usage of QUIK*COMM™ message and attached files, but wanted an easy to use, integrated solution in their financial reporting application.

Client Requirements

The Cooper Companies' headquarters in Palo Alto needs to receive monthly financial information from affiliates located around the world. The time differences and language barriers make communication with overseas offices more difficult, so financial reporting has to be done with a minimum of user effort and support. Cooper required a system that would be easy to implement, easy to use, and that required minimal support from Cooper headquarters. It was also important that the system be rolled out to the international locations with minimal training.

Through the use of their current system and its associated communications problems, Cooper better appreciates the value of error-free transmission which is now a requirement for the new interface. From a support standpoint, it has become important to support and maintain a minimum number of dialogues around the world and to leverage the use of existing technologies and worldwide support organizations wherever possible. The technology employed is required to operate effectively on the network as well as through Public Data Networks.

*MARK III is a registered trademark of GE Information Services.

*QUIK*COMM is a trademark of GE Information Services.

PROPRIETARY - FOR GE INFORMATION SERVICES EMPLOYEES ONLY



INFORMATION SERVICES

U.S.A.

Alternative Solutions

While the client did contemplate various networking options, the GE sales representative proposed an SDC study of the existing system interfaces as a means to retain and grow our current relationship. The SDC study reviewed the existing PCMB- and TSI-based applications for financial reporting and general messaging, with emphasis on the financial applications that utilize TSI. Cooper used TSI dialogues to perform sending and receiving of spreadsheet data and PC Mailbox for general messaging. Based on the study of their existing systems, three alternative solutions for improving the financial reporting system were proposed:

- TSI with XMODEM. This solution would still require the client to modify and maintain many dialogues.
- PC Mailbox direct access. This solution would eliminate the integrated user interface which Cooper required for the financial application.
- QK Attach Interface Program. This was the chosen alternative.

Why GE?

We provided immediate local support and SDC resources to respond to their needs. Our efforts provided them with a step-by-step evaluation of their new requirements and our proposed solution. They believed in our ability to deliver the proposed solution, both locally and through our worldwide support.

The GE Solution

The PC-based QUIK*COMM Attach Interface Program (AIP) simulates the attach feature of PC Mailbox, and allows a system developer to either integrate AIP as a sub-module within an application or execute AIP directly from DOS. In fact, very similar dialogs are used with AIP and PC Mailbox.

Like PC Mailbox, AIP can upload and/or download any combination of text and binary attach files associated with a QUIK*COMM message. AIP also allows the user to select the following types of download:

- rename file to be downloaded if it already exists locally
- overwrite existing file

- download to secondary directory if file exists in primary directory

Although AIP executes on demand, the end user may specify up to three time periods for deferred processing purposes. The end user may also invoke an option to capture handshaking and all pertinent information to a specified trace file (log file) for debugging purposes.

AIP does not handle any messages associated with the attach file; however, these messages are captured in the trace file, if specified.

Client Benefits

Cooper has received several benefits from this upgrade:

- Financial data is more accurate because Cooper can now transmit and receive data error-free.
- They are able to reduce their support time. Cooper liked the fact that similar dialogues are used with AIP, as with PCMB, which makes configuring sites, particularly foreign sites, easier.
- When they do provide support, it is easier since the AIP dialogs are more uniform and the AIP error log provides more specific diagnostic and trouble-shooting capabilities.

The Winning Team

The Sales Team consists of Larry Fruzzetti, San Francisco SDC, and Trina Clickner, Sales Representative, Palo Alto. Trina arranged for the initial consulting, constructed the site license arrangements, and with the help of Janice Orcutt, arranged for sales development to prepare the site license. Vince Wong, San Francisco SDC, was the original developer of the QK Attach Interface Program.

More Information

The QK Attach Interface Program (AIP) has been acquired by the Transport Program and is available to Sales and SDC for reuse and adaptation for similar prospect situations. A technical profile of this application is available in the InfoTalk "Transport Technical Library" data base. For additional information, QK "MACE", or call 8*279-5585.

\$\$\$ Success Story # 14, \$\$\$
\$\$\$ National Online Regulatory Access (NORA)TM \$\$\$
\$\$\$

\$\$ We Ended the Paper Chase \$\$

Business Problem

Telephone and long distance companies are regulated by the Common Carrier Bureau of the Federal Communications Commission (FCC). If a telephone company, individual, or anyone in the telecommunications industry wants to request a change to an FCC governed rule, or comment on a competitor's request, a very defined procedure must be followed. The procedure is similar to that of any long legal proceeding. From this process, the FCC receives documents like requests, oppositions, motions, petitions, comments, and memorandums on a daily basis. In return, the FCC releases documents that include orders, public notices, reports and news items.

Paper and More Paper...

The amount of paper cycled through the FCC averages 600 to 800 pages a day. Every major telephone, long distance, and telecommunications company must be able to acquire copies of those documents that they deem important.

A user needing to manually search through years of paper files for a specific case presents a business problem. These files may be sorted by date or by docket number. There is no way to locate these documents based on subject matter within the context of a document. The volume of paper is so

great that many companies throw away any hard documents that are more than six to twelve months old. That's the only way to make room for more paper!

The Height of "Manual Mode"...

Currently, acquiring a document means sending a runner to the FCC with a predefined list of documents. The FCC provides a room whereby a runner requests a document, receives a copy that must not leave the room, duplicates the copy - if a machine is available - then returns the FCC copy. Sometimes, the wait for a copy machine is too long, tempting the runner to take the FCC copy to their own office. In those cases the document is not available to others until returned. Companies that do not employ these so called runners and companies that do not have offices in the Washington, D.C. area must subscribe to delivery services or rely on outside legal firms for document acquisition.

Client Requirements

The clients are the legal and regulatory departments in the telephone industry as well as attorneys that practice before the FCC.

- The timely acquisition of documents is the first requirement.

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On many occasions the FCC only allows five days to respond to a particular matter. It can sometimes take three days just to obtain a document, leaving only two days to draft a response. When working on a case, every available day is needed to draft accurate responses.

- The second requirement is the capability to follow daily happenings in the FCC.

In the larger companies, individuals are assigned specific dockets. It is their job to find out about any actions taken against that docket - every day.

- The third and most important requirement is the ability to search through the multitude of documents by subject matter.

When working on a case you need the ability to study all the documents that relate to that case. The related documents might be cross-referenced by docket number, but in most cases the relationship is only by subject matter.

Alternative Solutions

There are no existing services that offer electronic access to complete FCC documents. While some services, like LEXIS, offer FCC orders and final decisions, none offer the full range of documents created by a pleading cycle.

Data Development, Inc. (DDI) is the media conversion company that is using sophisticated scanners to convert the documents to electronic format. We were introduced to DDI by U.S. WEST, the regional telco in Denver. GE was not the only alternative DDI had for the marketing of the scanned documents.

At first, DDI wanted to purchase a DEC VAX to store the data on their premises. The plan was to allow the ten or so largest users to log into the VAX and receive a high speed bulk dump of the data. Smaller users would dial in via a VAN. At one time DDI was dealing with McDonnell Douglas to take on the van portion of the business or the entire data base. DDI's other alternative was to transmit the data via IBM PCs, adding additional PCs as more customers subscribed to their service.

Why GE?

DDI and U.S. WEST selected GE as the distributor of the FCC data base. DDI knows the scanning business but has little experience in information

services. GE has the expertise in developing data base access software and the know-how to take a product to market. Of great value to DDI was the fact that we already have a sales force dedicated to selling in the telephone industry, which is where the primary market exists. By teaming up with GE, DDI acquires a national sales force, a quality network, software development, and a marketing department.

The GE Solution

Bell Communications Research (Bellcore), owned by the seven regional Bell Telephone companies, uses its insider expertise to identify, track, and acquire the documents from the many departments within the FCC. U.S. WEST then organizes and classifies the documents before forwarding them to DDI. Once at DDI's Alexandria, Virginia branch, the documents are scanned and converted to electronic format for loading into a HI-TEXT data base on the GE MARK III Service.

Access to the NORA system is through a user-friendly interface residing on an IBM or compatible personal computer. Users are presented with a screen of ICONS, four of which handle current functions. The remaining ICONS will be assigned to future business needs.

If either the Daily Digest ICON or the FCC Library Search ICON is selected, NORA logs onto MARK III Service. If the FCC Library Search function is chosen, users enter search criteria to locate pertinent documents. Users can enter a freeform search criteria and also narrow-down that search with the aid of function key controlled keywords. In addition to standard freeform word searches, HI-TEXT allows users to search for occurrences of one word with respect to its proximity to another word. Wild card searches gives users another option by allowing them to enter partial words and having HI-TEXT look for all words with that given beginning.

Once the search criteria has been satisfied, users may download an entire document or tell NORA to only download those sections of the document that contain search criteria. When downloading a document of interest, NORA fills up a screen and stops. Meanwhile the document continues to be downloaded into the PC's memory. Users can then read a screen of data independent of what is being downloaded.

Client Benefits

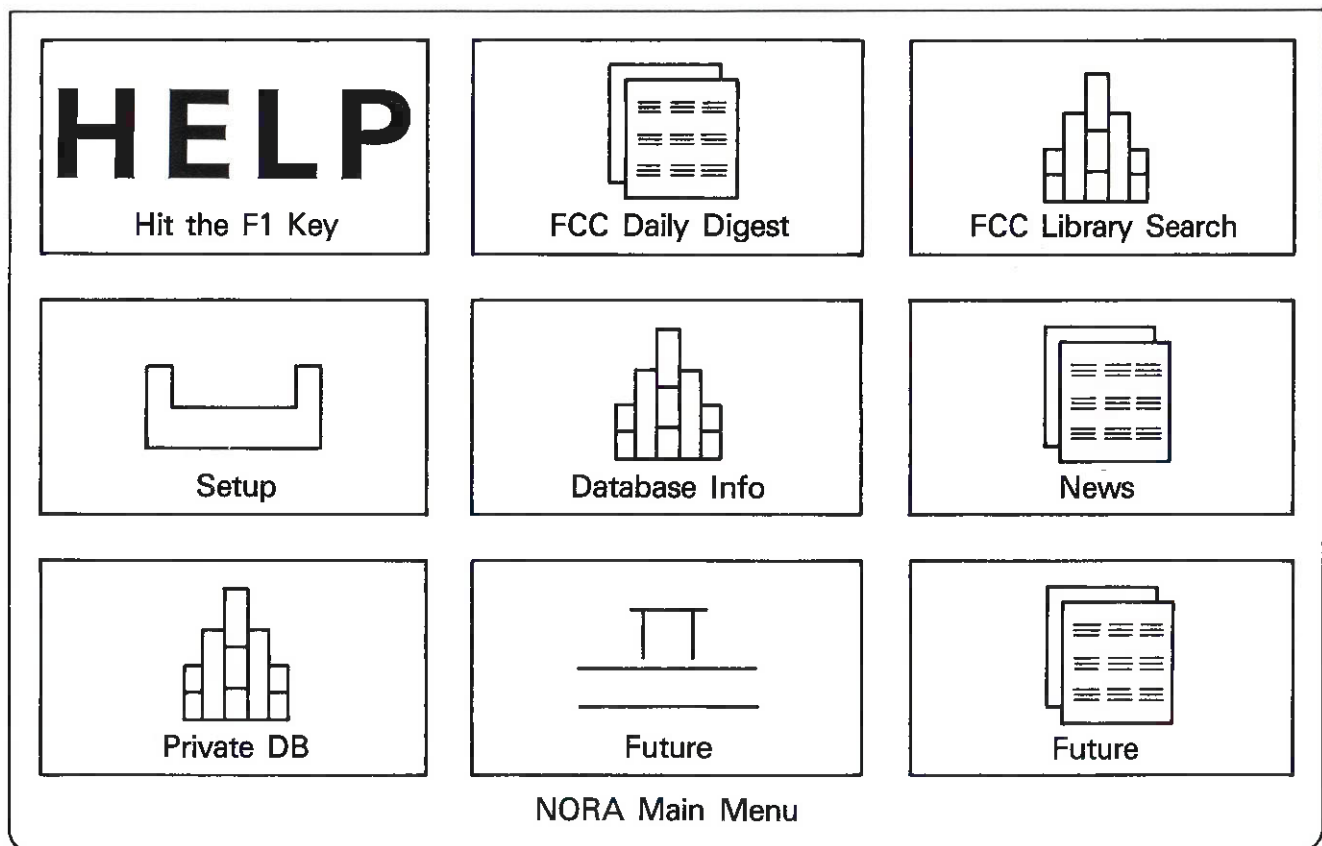
Documents can now be located and acquired in a matter of minutes. Clients tell us that searching through paper used to take up to a week utilizing one or two clerks full time. In addition to saving time, NORA reduces the amount of daily air express and facsimile charges. Some of the smaller telephone companies can locate documents on their own as opposed to paying over a \$100.00 per hour for outside council. Finally, each day saved in the document acquisition process adds a day to the response development process during critical FCC filings.

The Winning Team

The account manager in Bryan Inderrieden's Western Communications Region is David Jacobs. The project is managed by Senior Technical Representative Cindy Douglass. The development is managed out of Joe Grezegorzewski's SDC Region by Jim Motyka. Other people key to the success of the application are Susan Williams, Sandy Carey, Paul Newell, and Mary Ingalls.

For More Information

Information on adaptation or reuse of this application in other prospect situations is available through the Transport Program. Contact SDC Programs, QC "MACE", or call 8*279-5585. A technical profile of this application is available in the InfoTalk Transport Library data base.



*NORA is a trademark of Data Development, Inc.



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Success Story # 13, SINCLAIR P.O.S. System

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\$\$ We Made Our Point

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The Client

Sinclair Oil Company, headquartered in Salt Lake City, markets gasoline and related products through a network of 2700 service stations in the Midwest and Western states. This network includes 300 owned stations, and a larger and growing number of independent stations. One hundred or more independent franchised stations may be controlled by a single owner who deals with Sinclair for products.

Client Requirements

Sinclair strongly emphasizes a high quality service orientation in securing and maintaining business with independent owners and their stations. This includes:

- providing responsive levels of product availability
- rapid problem resolution
- effective brand promotion
- a loyal customer base

Although it rates highly on these various factors, Sinclair has been faulted by operators for the lack of a complete, cost effective electronic point-of-sale (POS) and credit card system. As Sinclair works to convert franchised stations from other oil companies, it is critical to the operator that loyal credit

card customers continue to be served in a convenient manner.

Accordingly, Sinclair determined that a POS system would be required for the company to maintain and continue to grow its distribution channels.

Alternative Solutions

Sinclair contracted with a provider for an authorization and draft capture system. In fact, Sinclair was the first oil company in the nation to offer dial-up draft capture. Because of this development, Shell, Gulf, AMOCO and Total Petroleum followed Sinclair in using the same POS provider.

However, Sinclair's experience with its POS system was not fully satisfactory. Sinclair's concerns included the following:

- While the provider's network *did* provide adequate credit authorization capabilities, the inclusion of draft capture caused problems due to the architecture of the provider's network. With that architecture, a specific CPU is assigned to capture the data coming into a given center. Should this CPU fail, another processor (usually located in a different city) is assigned to take over the load. The switch-over could take from 20 minutes to an hour, during which time the transactions coming into the network could be lost. When the new

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CPU does come up, the station operator is faced with a difficult balancing task, with parts of the daily activities divided between CPU's and potential lost transactions/data during switchover.

- The provider's software had little flexibility to implement enhancements that, in particular, would be required to support marketing promotion efforts. Software change was limited and fairly expensive to consider. For example, there was no way to accept a "foreign" (e.g., another oil company) credit card for a period of time, while a station's customers switched to the Sinclair card. This requirement was key to Sinclair's successful conversion of franchised stations from other oil companies.
- Even though Sinclair operates its own proprietary credit card, it was placed in the situation of being "unwilling" to accept the card for large purchases (e.g., tires and repairs). Since the current provider's system offers only authorization (yes or no) capability, no provision in the software, such as credit limits, allowed for conditional sales of large ticket items.

GE Information Services Solution

GE offered an alternative solution to Sinclair: an SDC-developed, customized point-of-sale system. The solution included a proprietary credit card data base residing on MARK III Service with pass-thru to a third-party host for credit authorization for the major credit cards and a draft capture system for those cards which permit such transactions.

Why GE?

Sinclair selected GE's solution because our approach addressed their stated concerns with the current provider. The GE customer solution is a more complete and flexible system allowing Sinclair's marketing department to respond to future needs. And, our unique cluster file architecture and redundant network enable us to consistently deliver high quality service to all of Sinclair's 2700 locations.

In addition, our prior seven year track record with the PETRODEX System (a set of private format MARK III EDI applications for the petroleum industry) and Sinclair's very positive experience with that system, proved valuable in demonstrating the reliability of our network and MARK III Service.

Our key client contacts were the Director of Planning (with responsibility for the DP/MIS function and business/marketing planning) and the Manager of Special Projects. Both contacts report to the executive V.P. level.

Issue was Quality not Price

Price was not the major issue in closing the opportunity. In fact, Sinclair signed a PSA/CDR contract for \$55K to develop a system that their upper-level management felt they had already developed and paid for with the incumbent provider. The key issue to Sinclair was the need to improve quality so they could move ahead with their marketing efforts. They were willing to pay a comparable/competitive price to do this.

Development of the GE solution for Sinclair started in August, 1987. Transport Program software, originally developed as pilot software for the Stuart Anderson Restaurant POS opportunity, is being used as a basis for the Sinclair development effort. In addition, "back-room" processing software, previously developed to support GE's POS product offering, is being adapted for this application. Deployment of the system is targeted for year end.

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The baseline transaction estimate, predicated upon the 300 stations using the previous provider's system, is 600,000 transactions per month. The system is estimated to ramp to \$100K MPR (1 million transactions per month) by year end 1988, and is estimated at over 2 million transactions per month when fully ramped (target year end 1989).

Client Benefits

The availability of an effective electronic point-of sale and credit card system is not only key to Sinclair's day-to-day operations, but also is critical to their competitive growth strategy.

- The quality of the GE-provided solution will allow Sinclair to redirect the efforts that have been going into maintaining and balancing the existing service stations into bringing up additional franchised operations.
- The flexibility of the GE Information Services custom solution will provide Sinclair with a new marketing tool to further penetrate and convert service stations flying competitor's colors to the Sinclair "Dinosaur green."

Sinclair is interested in minimizing operational problems and in moving ahead with their deployment plans - with a solid system behind them they will be able to do so.

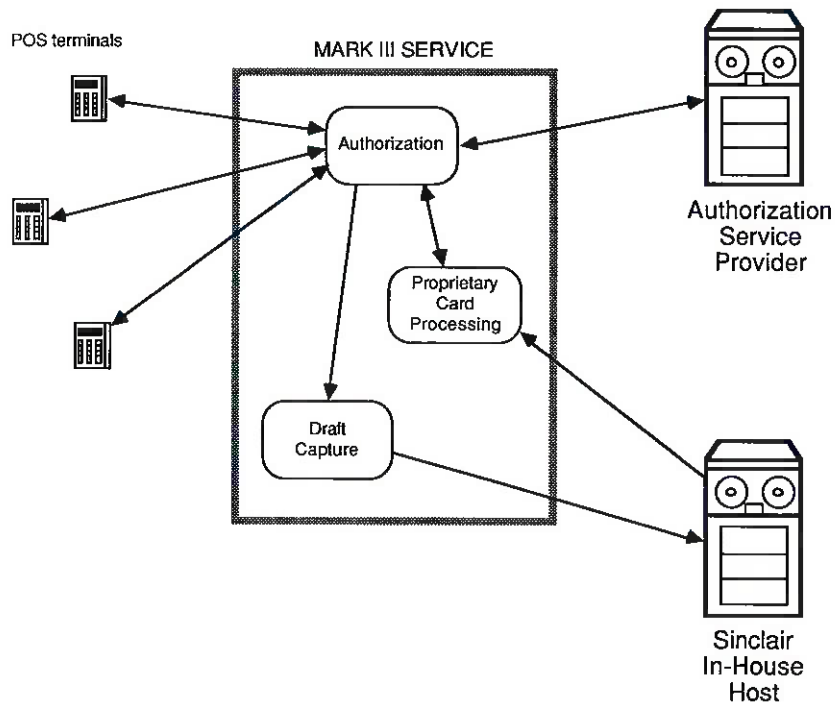
The Winning Team

The account executive for Sinclair is Jim Marzonie from Denver. Other key people responsible for the close of this opportunity are D. J. Crane (Mountain States regional manager), Chris Hogan (TR - Denver) Janice Orcutt and Dennis Thomson of the Sales Development Operation.

More Information

This application is a planned acquisition of the Transport Program and will be available to Sales/SDC for reuse and adaptation for similar prospect situations. For additional information, contact SDC Programs, QK 'MACE' or call 8*279-5585.

Sinclair P.O.S. System





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Success Story # 11, GE Corporate Finance Registered Mail System

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Transport Program Tools Completed the Solution

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Business Problem

GE Corporate Finance has the requirement to distribute information to key members of the financial community throughout the GE Company. Such information as corporate budget and planning reports, as well as accounting consolidation and tax compliance data requests, must reach financial and business managers in all GE components in a cost-effective and timely fashion. In the past, GE Corporate Finance distributed the bulk of this information via postal services, but needed to improve this distribution process.

In addition, as a result of the GE/RCA merger, GE recently integrated GE/RCA corporate finance via a PROFS-based application on their IBM® host in Cherry Hill, NJ. This system facilitates electronic distribution within the corporation. PROFS generated e-mail messages are used to communicate important information. Reports are stored in a bulletin board environment and e-mail messages are sent to advise managers which reports have been updated. Some of the messages are considered critical or urgent and thus require acknowledgement that recipients have listed them. A customized extension of the PROFS Message Acknowledgement capability is used to satisfy this "Registered Mail" requirement.

While the localized PROFS application proved to be an excellent initiative into electronic financial reporting and distribution within the corporation, there remained a broader requirement to reach all the GE component users.

Alternative Solutions

The GE Corporate Information Technology (CIT) organization evaluated potential vendors for the required electronic mail and bulletin board services for over eight months. Because the services would be used by high-level finance executives, CIT insisted upon on a user-friendly system. And, the system would have to meet the host/application connectivity requirements as well as provide the broad network coverage that was required. Finally, the system would have to be able to support the "Registered Mail" capability.

Why GE Information Services?

CIT chose GE Information Services as its vendor, settling upon our QUIK-COMM™ system as its preferred alternative. There were several major reasons why the QUIK*NET system (the GE intra-company application of QUIK-COMM) proved to be the most attractive solution for extending the reach of the GE corporation PROFS-based financial distribution system.

- Since 1985, when GE's 20-year-old RECOMM/GCOMM messaging service converted to QUIK*NET, GE has grown a widespread user base on this electronic mail system and has been successfully using the system for general information distribution at significant cost-savings over other means.
- The GE Information Services' teleprocessing network is viewed as having high reliability and breath.

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- The PC Mailbox product aptly fulfills the requirement for user-friendly access.
- The MARK III® bulletin board capabilities fulfill the need for parallel report storage on the extended system.
- GE Information Services could provide the required PROFS-to-QUIK-COMM interface, and would accommodate the "Registered Mail" requirement through an SDC custom implementation.
- GE Information Services offered a complete implementation plan that included specially-designed training and supporting documentation.

Key Contacts

Our key contacts were Jim Costello, vice-president Corporate Finance, and Ed Skiko, vice-president Corporate Information Technology. Gaining their high-level executive support was instrumental in achieving the sale, and ultimately proved to be the leverage necessary for a successful implementation.

GE Information Services Solution

The GE solution is based upon the QUIK-COMM/PC Mailbox product set. An early version of the QUIK-COMM/PROFS interface (that uses PROFS on our MARK 3000™ system as an intermediary) provides the connection between the GE Corporate Cherry Hill PROFS system and MARK III Service. Software available through the Transport Program was adapted and expanded by GE Accounts SDC and the SDC Technical Center East to provide the PROFS to QUIK-COMM "Registered Mail" capability.

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More than 700 copies of PC Mailbox were purchased for use with this system. The approximate MPR impact of the system is \$25K. Associated PSA revenue was \$50K for system development and specialized training and documentation, and \$24K was received for supplying a Dedicated Client Services person during the 4 month implementation and ramp period.

The system went into production earlier this year and is expected to be fully ramped to link the financial units of all GE components by the end of 1987. The paper distribution system is scheduled to be discontinued at that time.

Transportability = Productivity

The GE solution proved to be an excellent example of the productivity savings inherent in the Transport Program. Where an off the shelf

product was not available, the system has taken advantage of field-developed software from the Transport Program to speed the customized portion of the implementation. Considerable development productivity was gained by the use of the Transport Program software - with an estimate of 40% or 27 persondays savings by GE Accounts SDC.

Client Benefits

Key client benefits are improved accuracy and operational efficiency of GE financial reporting and distribution. With the electronic financial distribution system, GE has a system that will allow them to distribute information days or weeks earlier than systems relying on postal services. And, the extension of the system via the GE Information Services solution insures that each GE component has immediate access to the most current information.

In addition, the installed base of users that resulted from the financial application has made it more practical to implement other new applications to serve the company - for example, the posting of financial job openings for the Company.

The Winning Team

Steve Canale of Bob Simmon's GE Accounts organization is the corporate GE account manager. Others instrumental to this successful close and implementation include Bob Donnestad (manager of the GE Accounts Business Communication Services) and Bob DeLeo (Business Communication Services application consultant). Critical development and project support was provided by Louise Wolff of GE Accounts, Mary Jane Low of Dave Slone's GE Accounts SDC organization, Del Mitchell of the SDC Technical Center East, and Ken Midtbo of Paul Inserra's SDO organization. Lori Allen provided outstanding implementation support as the dedicated Client Services person, and the Training and Documentation Services organization provided excellent assistance to meet the client's training requirements. Silvio Anichini's SDC organization contributed a key portion of the Transport Program software that was adapted for this implementation.

More Information

This application is being acquired by the Transport Program and is available for reuse or adaptation for similar prospect situations. A technical profile of the application can be found in the InfoTalk "Transport Library" data base. For additional information, contact SDC Programs, QC 'MACE' or call 8*279-5585.



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Success Story # 3, Electronic Distribution Channel...

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\$\$ “We Quickly Developed a Prototype Solution That Met All Three of the Company’s Network Requirements and Provided a Smooth Interface...” \$\$

THE COMPANY DESCRIPTION

The client, a leader in the insurance industry, is an international company with direct revenues of approximately \$12B a year. The company has multiple divisions to serve such functional areas as medical, life, automobile, etc. The company has a wholly-owned subsidiary that provides data processing for the various divisions and functional areas.

BUSINESS PROBLEM

A key business requirement for this insurance company is the ability to readily exchange information such as policy pricing, benefits, and quotations with their client base. As is true with most insurance companies, they do 80% of their business through 20% of their agents. For these large volume agents, the company provides information exchange, with access to their various mainframe computers, via a dedicated leased-line telecommunications network managed by its data processing subsidiary. The company wanted to provide a comparable service level to the remainder of their client base, including small-to-medium independent agents and large group carriers, who had an installed base of IBM* PC's. And, they also wanted to provide an intra-company communications capability across their various divisions.

ALTERNATIVE SOLUTIONS

The technical requirement was for a network-based capability to support electronic mail, two-way file transfer, and, in general, PC to mainframe connectivity.

The company considered the alternative of expanding its internally managed dedicated network. However, the individual agent volume did not warrant leased line connections. And, instead of taking on the task of augmenting their internal network's dial access capability, they chose to look at third party value-added network providers.

WHY GE?

The GE Information Services advantage was due to the high degree of flexibility and intelligence we could demonstrate within our networking service. Our strategy was to quickly develop a prototype solution to meet all three of the company's network requirements and provide a smooth user interface.

GE SOLUTION

The resultant technical solution was a PC menu-driven front-end system.

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This system provided access to

- (1) file transfer
- (2) E-mail
- (3) networking functionality

Complementary software for the file transfer function was developed on MARK III® Service (custom XMODEM solution). One of our off-the-shelf-products, PC MAILBOX, was chosen for the E-mail function. Finally, submenus were created to drive direct PC connection via our network to the appropriate mainframes throughout the company.

Of particular interest to this insurance company was that our file transfer capability provided them a robust yet highly disciplined store and forward environment. File transfers are monitored and audited via MARK III Service. File delivery is controlled, and a "many-to-many" transfer scheme is enabled, via a header control mechanism. Both attended and unattended file transfer modes are available for the PC's. In a given session, a PC can send files and also receive files. In the evening, the company's mainframe(s) use DSXMIT to connect to MARK III Service to retrieve files that have been collected from the PC's and to place files (including programs) for subsequent delivery to the PC's.

Our software development for this solution took approximately 105-200 persondays. The company is in pilot now with 20 PC units and one of their large IBM mainframes. The application is

estimated to reach a plateau of \$25K MPR with 500 users in 1988, and the potential is there for more than 1000 users in the future.

CLIENT BENEFITS

Our key client contacts were at the Executive VP and VP MIS levels within the company's data processing subsidiary. On behalf of the functional divisions they serve, our contacts perceive a marketing advantage to be gained by extending their ability to communicate with the company's "casual agents." In the current competitive environment, our contacts believe that giving these agents easier access to data will contribute to the company's market share.

THE WINNING TEAM

The client account is in Bill Stack's New Jersey sales region. Lou Ciccone is the account executive. Key SDC contributors from Alex To's SDC region included Richard Reiss as project manager, Paul Herzog, Dave Chang, Howard Forer and Charlie Cappello.

MORE INFORMATION

This application is being acquired by the Application Transport Program, and will be available to Sales/SDC for reuse and adaptation for similar prospect situations. A technical profile of this application will be made available in the InfoTalk "SDC TECH PROFILES" data base. For additional information, contact SDC Programs, QC "MACE", or call 8*279-5585.

\$\$\$	Success Story # 4	\$\$\$
\$\$\$	Electronic Order Transmission System	\$\$\$
\$\$\$	NYPSA (National Yellow Pages Service Association)	\$\$\$

\$\$	Winning with the GE Reputation for Quality	\$\$
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COMPANY DESCRIPTION

NYPSA is a national service association of publishers and authorized sales representatives for a line of "specialty" advertising publications. The association offers advertisers the opportunity to purchase advertising in multiple yellow pages publications by making one contact, negotiating one contract, and receiving one bill. Since the association was founded in 1975 their revenue has increased by 387%, and their 1986 revenue was in excess of one billion dollars.

BUSINESS PROBLEM

Because of NYPSA's growth and the dispersed locations of its members, it was in need of an accurate, timely, and cost-efficient method of sending orders from the sales representatives to the publishers. In effect, the association required intercompany communications, often in a "one to many" mode, and felt they could no longer rely on the mail as an effective vehicle. Once the association determined that an automated solution was called for, they were faced with the additional problem of having to communicate between the variety of hardware environments that existed across their membership base.

ALTERNATIVE SOLUTIONS

NYPSA contracted with a Big 8 consulting firm to develop the specifications for the "Electronic Order Transmission System" they required. While the

association did have some in-house processing capability, they did not have extensive networking capability nor the required system support people. The association membership voted to source the software, networking, and processing from a third party vendor. Over the course of 10 months, the association issued two RFP's and considered proposals from 10 competitive vendors.

WHY GE?

NYPSA chose GE from that competitive field for a number of reasons. While price was a factor, "lowest price" was not the determining factor. Certainly the GE name and quality reputation were key to our selection. And, we also stood out from the other vendors because our approach over the long sales cycle was consistent, while other vendors changed their approach from proposal to proposal. Throughout, GE maintained a steady, professional and knowledgeable position. On balance, the association chose GE because we could provide:

- a worldwide network
- a proven MARK III® service
- connectivity to a variety of mainframes and PC's
- and, a strong SDC group with the reputation for delivering customized systems on time

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GE INFORMATION SERVICES SOLUTION

The resulting GE technical solution for the "Electronic Order Transmission System" is a customized EDI-like store and forward application, featuring "immediate" delivery of mail in a very cost-effective manner.

Advertising orders are transmitted in batches to a user's "out mailbox" on MARK III. Multiple addresses per mailbox are allowed and group addresses for broadcasts are supported. Batch number control is enforced and transmission accountability is verified with send and receipt acknowledgments returned to the sender. A friendly front-end for XMODEM supports the sending and receiving of mail. A High-Speed Service interface and asynchronous Data Entry Mode are also supported. The mail distributor (TSS/F77) program, at the heart of the system, is designed to run with throughput of over a million characters per minute with minimum CRU consumption. Overall, the application is designed to average 1 CRU or less per transaction, depending on the batch mix. A user administrative function, as well as a full-bodied support package, provides for validation, tracking, and diagnostic capabilities.

The application was implemented for the association in 3Q86, and since that time has been in a fast ramp mode. The MPR in the first month of production was \$15K and has grown at a steady pace to \$65K MPR early this year. At present, the application is handling 7,000 - 10,000 transactions per day on average. At full ramp, the estimated MPR is in excess of \$80K, and possible enhancements slated for the second half of this year could push MPR to over \$100K.

CLIENT BENEFITS

NYPSA elects its executive director from among its membership ranks, but has a staff of employees led by its General Staff Manager who is concerned with day-to-day operations. The staff manager was our key contact. As previously stated, the association was looking for an accurate, timely, yet cost-effective means of placing their orders. On behalf of the association, the staff manager was convinced that an automated order system that met those requirements was needed to remain competitive in the advertising industry.

THE WINNING TEAM

The marketing representative for this account is Jim Greulich from the Western Communications Region. Other people key to the success of the application and its successful ramp are Art Lee, Mary Ingalls, Peggy Jarolin, Christine Syzonenko, Jackie Daehler and Alice Roberts.

MORE INFORMATION

This application is a planned acquisition of the SDC Application Transport Program and will be available to Sales/SDC for reuse or adaptation for similar prospect situations. A technical profile for the application can be found in the InfoTalk "SDC Tech Profiles" data base. For additional information, contact SDC Programs, QK "MACE" or call 8*279-5585.

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Success Story # 5, Wang VS to QUIK-COMM™ Interface

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Account Support led to Increased Product Use and a Stronger Client Relationship

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Business Problem

The client, GE European Headquarters in Shortlands, U.K. has an established office environment based upon Wang equipment, with a significant investment in both their Wang-installed base and Wang training for their personnel. Historically, their "electronic mail" capability was Telex-oriented (the GE RECOMM system). Thus, when they began to use the GE version of QUIK-COMM on MARK III® Service, they commissioned a London-based software house for Wang interface software that was oriented toward a single administrative address. With time, the limited nature of this interface became evident to GE Information Services. Because the interface was "Telex/station-oriented", the client was using it for only a small subset of its potential user community's electronic mail.

Client Requirements

The GE Information Services representative for the account, Penny Melrose, determined that a better interface would be required to encourage the use of QUIK-COMM. Penny quickly established a series of procedures using the Wang TTY interface that enabled a multiple address environment. While this environment was an improvement, the interface still lacked a user-friendly frontend. A capability like PC Mailbox™ would have been ideal, but it would have to be provided on the Wang because of the cli-

ent's prior investment in that technology. Penny realized that to provide the proper encouragement a better Wang (program-controlled) interface would have to be developed. Further, she saw that the client needed an interface that would help them with their overall management of their electronic mail traffic between their Wang systems and QUIK-COMM, providing the ability to:

- Send/receive QUIK-COMM messages on the Wang without regard to QUIK-COMM format conventions
- Easily source message text from the Wang library for outgoing mail and store incoming QUIK-COMM messages into the Wang library
- Address QUIK-COMMs via a Wang-resident directory

The GE Solution

To meet the client's needs, Penny developed a series of Wang-resident COBOL programs that supported the sending and receiving of electronic mail to/from QUIK-COMM. The user interface is menu-oriented and function key-driven.

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Message text can be prepared within the user's Wang word processing library and sourced by the Wang Document ID. Because the QUIK-COMM addresses of the GE client are vestiges of the original Telex environment, they are often not intuitive. Thus the solution included a Wang-resident QUIK-COMM Directory from which addresses can be sourced. The software has been designed so that messages can be queued to the Wang holding file ("Saved File") for later transmission to QUIK-COMM or sent immediately to QUIK-COMM. Incoming messages (being received by the Wang) are held in a temporary file and then placed in the user-specified Document ID within their Wang library. In a given session, mail can be sent or received or both.

In order to provide a total electronic mail management capability, several special features were also included, such as: program controlled Delivery Check, Forward, Cancel, Relist; a Wang-resident QUIK-COMM Status Log, and security and supplemental "billing" capabilities.

A Win-Win Situation

The Wang to QUIK-COMM interface allowed the client to leverage the investment they had made in Wang technology, while at the same time reaching out to embrace the additional advantages of a full-featured electronic mail capability. The interface is currently in Beta test with several of the client's executive secretaries/administrators and has been extremely well-received.

All indications are that the interface will fulfill its original intent—to encourage the client's use of QUIK-COMM. In addition, it appears that the overall GE Information Services' relationship with the client has been strengthened because of the initiative and quality support provided by Penny Melrose, the GE Accounts representative for this client.

More Information

The Wang to QUIK-COMM Interface has been acquired by the Application Transport Program and is available to Sales/SDC for re-use and adaptation for similar prospect situations. A technical profile of this application is available in the InfoTalk "SDC TECH Profiles" database. For additional information, QC "MACE", or call 8*279-5585.

\$\$\$ Success Story # 6,
\$\$\$ Customized Forms

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\$\$ We had the "Winning Form"

\$\$

Business Problem

The client, Chrysler, is the third largest domestic U.S. automobile manufacturer, with several thousand independent local dealers in the U.S. and Canada. Chrysler needed an automated system to speed up the collection and processing of information using standardized business forms. Blank forms would be distributed electronically to dealers. The system would then allow form-fill-in by unsophisticated users. After initial entry, the data would be transmitted electronically for review, entry of additional information, and summarization and tabulation on Chrysler's host systems. Forms included incentive program reports, buyer contact reports, surveys and various vehicle tracking reports—a total of 16 different forms.

Client Requirements

To help insure acceptance of the system by the dealers, the system had to use existing IBM PC-compatible hardware with 256K of memory. Furthermore, most end users could be expected to have minimal knowledge of the PC operating system. The forms had to have an automatic calculation capability for numeric data and allow modification of partially completed forms. In addition, an integrated communications capability linked to an electronic mail system was highly desirable.

Alternative Solutions

Chrysler considered a software package from Kensington Microware, using a Western Union electronic mail connection. While functionally complete, this solution lacked an integrated communications interface and required the user to switch disks and enter a completely separate software package to accomplish data transmission. Other solutions considered also required an independent communications link.

Why GE?

The client selected GE's solution: an SDC-developed, PC-based forms system coupled with QUIK-COMM™. In addition to meeting all stated requirements, GE's Forms Utility included a built-in communications interface and could be readily enhanced to meet expanded client needs. In addition, GE's training and documentation capabilities were needed for the massive roll out which the system would entail.

The GE Solution


The GE solution consists of PC-based software written in "C" which allows both the creation and editing of custom form templates and form-fill-in by end users. The Form Editor uses a full screen editor, function keys, and menus to simplify the

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form definition process. Both text and numeric fields can be specified, along with optional character type checking, table "lookups," and range checks. A high-level calculation "language" allows definition of fields computed from user-supplied data.

The form-fill-in process uses previously defined blank forms and has help screens to guide the user through entry of data into the form. GE's software is unique in allowing revisions to completed forms, and both completed and partially completed forms can be saved for transmission to QUIK-COMM. The system allows transmission of data only, for later merging with a form template on another PC or for host processing, thus significantly reducing data transmission costs.

GE's software development took 150-200 person days and is now in pilot operation. MPR at full deployment is expected to be \$250K with over 6000 users.

Client Benefits

The Forms system simplifies processing and significantly reduces entry errors. Forms are automatically forwarded for review without intervention by the reviewers. Reviewers can append

comments to completed forms or accept a form with a keystroke for forwarding to headquarters. New forms and form revisions can be transmitted electronically and used almost immediately by all system users, significantly improving reporting consistency.

The Winning Team

The account is in Jim Connors' Mid-East sales region. Dave Hall is the account manager and Debbie George is the senior technical representative. The key SDC contributor from Silvio Anichini's SDC region, Larry Domeracki, was assisted by Dave Leland and Ann Salmon. The Training and Documentation Services team included Bill DeLeo, Betty Koch, and Nancy Mosier.

More Information

This application is being acquired by the Transport Program and will be available to Sales/SDC for reuse and adaptation for similar prospect situations. A technical profile of this application is available in the InfoTalk "Technical Library" data base. For additional information, QC "MACE", or call 8*279-5585.



\$\$\$ Success Story # 7, \$\$\$
\$\$\$ QUTMIK-COMM-to-SYSM Electronic Mail Link \$\$\$
\$\$\$

\$\$ We had the "Backbone" that \$\$
\$\$ Made it Happen \$\$

Business Problem

The Continental Grain Company is a \$13 billion, privately-held commodity trading and shipping enterprise. With offices worldwide, using diverse data processing and communications systems, Continental Grain needed a real time international electronic messaging network to coordinate time-sensitive operations and improve efficiency. Key to the proposed system was an online link to a SYSM messaging system operating on an IBM® host in Chicago. The existing system, built on IBM 3780 batch interfaces using leased lines into a CICS application, did not adequately support the client's critical online business communications needs. In addition, future support by IBM of 3780 interfaces for CICS was uncertain.

Client Requirements

An interactive, real-time "backbone" electronic mail network was required which would link the various diverse systems to each other and, through common user interfaces, also allow communications outside the company via Telex. The new system had to provide an interactive CICS interface into SYSM. Also desirable were file transfer and group addressing capabilities. In addition, with offices in 40 countries, Continental Grain had to be sure that the network met all local regulatory requirements.

Alternative Solutions

The client considered a private SNA network but concluded that it would be difficult to implement and manage and, due to its message switching characteristics, would probably not be acceptable to some regulatory agencies. Also considered was a solution offered by Western Union, which offered a "bridge" to SYSM systems, in conjunction with CSC's international network.

Why GE?

GE Information Services was selected to provide the international messaging network primarily because of GE's ability to design and develop a customized solution, based on an existing international network, using SDC's experienced professional staff. Other important considerations were GE's stability and financial strength, worldwide coverage through affiliates and distributors, global client services support, and multiple products and services (such as BusinessTalk™ and MARK*NET™) which could be applied to meet other Continental Grain needs.

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® MARK III is a registered trademark of GE Information Services

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The GE Solution

GE proposed using QUIK-COMM to route messages among the various Continental Grain locations and local systems. QUIK-COMM also provided a Telex interface for traffic flow between domestic U.S. and non-company international locations. Continental Grain users without an existing data processing capability could use GE's PC Mailbox software, while other systems could link to QUIK-COMM using standard asynchronous or bisynchronous protocols.

The QUIK-COMM-to-SYSM link uses an SDC-developed, customized program on MARK III® Service based on multi-stream FCMF77 capabilities. SDC also developed over 30 CICS application modules to provide a front-end to the SYSM system. Communications to Continental Grain's IBM host use ASCII asynchronous to EBCDIC 3270 SNA/SDLC protocol conversion. (The PCI hardware protocol converter used to set up the system will eventually be replaced by a solution based on the MARK III LU6.2 emulator capability for improved reliability.)

The system allows SYSM users to send messages to any valid Continental Grain QUIK-COMM address, including Telex, and allows QUIK-COMM users to send to any valid SYSM address defined to QUIK-COMM. Processing of messages for routing across the QUIK-COMM-to-SYSM link occurs as soon as the message becomes available. After receipt of a message by one system, an acknowledgment is returned to the sending system.

A monthly tape is made available to Continental Grain that details all cross-link message activity, allowing allocation of system charges to users.

Client Benefits

By providing fast and efficient international communications, the worldwide messaging system helps Continental Grain maintain a critical competitive edge in the fast-paced international commodity trading marketplace where immediate action can make all the difference. The consistent interfaces and reliable and integrated communications system provided by GE Information Services has allowed Continental Grain to concentrate on the business they know best: international commodities trading.

The Winning Team

The account manager from George Alber's New York Commercial Region is Jack Goldberg. The project was managed out of Izy Franco's SDC Region by Mach Flinn. Additional assistance in configuring and installing the communications interfaces was provided by Dan Ryan and Mike Bradshaw of the Telecommunications Department, Julian Fainlight from MARK III Client Systems, and by SDC's IBM Technical Center personnel.

More Information

A technical profile of this application is available in the InfoTalk "Technical Library" data base. For additional information on reuse or adaptation for similar prospect situations, QC "MACE", or call 8*279-5585.



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 \$\$\$ **Success Story # 8,**
Legal Communications System

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\$\$ Where Our Responsiveness
Really Counted

\$\$

Business Problem

The legal department of Coca-Cola® processes hundreds of contracts and other legal documents each year. This activity involves some 40 locations around the world, and existing methods of document exchange: courier services and the mail. Both were expensive and time-consuming. Coca-Cola preferred a way of exchanging revisable documents and memoranda electronically among their offices (operating various types of hardware), as well as with locations accessed only via Telex. In addition, an automated access procedure running on a regular schedule was desirable for some high volume locations, including Coca-Cola world headquarters in Atlanta.

Alternative Solutions Considered

Coca-Cola considered a solution proposed by International Telephone and Telegraph, the incumbent data communications vendor, which included a "bridge" for Telex access. Since QUIK-COMM™ was already in use domestically, however, this solution would have required separate communications vendors and interfaces for electronic mail and document exchange.

Why GE?

The legal department's unique and urgent needs allowed them to investigate alternatives to solutions proposed by ITT, which was already supplying Coca-Cola's international data communications capabilities.

Coca-Cola was already a satisfied user of QUIK-COMM and placed a high value on maintaining a relationship with a proven vendor for their expanded worldwide telecommunications needs. QUIK-COMM's availability in many of the countries in which Coca-Cola does business, coupled with the Telex interface for other locations, were important factors in GE's winning solution as was Educational and Documentation Services for creation of customized user's guides. Perhaps most important, GE Information Services' responsiveness in developing an acceptable solution, coupled with ready access to GE technical assistance for installation of communications interfaces, was critical in winning the business.

GE Information Services Solution


The Legal Communications System permits the exchange of Displaywrite 3 documents among system users on IBM System 36s, IBM PCs using PC Mailbox, and Telex. Customized software on the

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System 36s determines destination user type (System 36, PC, or Telex) and transmits documents accordingly. Processing on MARK III® Service is based on the sender/receiver combination, as follows:

- System 36 to System 36: Transmission via 3780 emulation and High Speed Service (HSS). Custom software on MARK III Service places incoming documents in the appropriate output queue. The data content of the documents is not examined, but the files may be reblocked and have character set and file type conversions. Some System 36 installations have autocall capability and dial up MARK III Service on a regular basis to check HSS mailbox and QUIK-COMM.
- PC Mailbox to System 36: PC Mailbox users send QUIK-COMMs for short messages and use attached files for longer documents. Custom software checks QUIK-COMM for attached files and places in appropriate HSS output queue.
- System 36 to PC Mailbox or Telex: System 36 software sends messages to QUIK-COMM addresses determined by local directory lookup for either PC Mailbox (using attached files for legal documents) or Telex users (normally for brief messages).

Client Benefits

Worldwide exchange of documents and messages is accomplished using a single telecommunications interface at each location for both electronic mail and document exchange, and for both MARK III Service, HSS and QUIK-COMM users as well as Telex. The time required to send documents to other locations has been reduced from days to minutes, and costs are more than 50% less than that of courier services. The system has, in addition, laid the groundwork for future value-added services such as text data base searches, which can be made available through the same communications interface.

The Winning Team

The account manager is John Adams from Lin Register's Southern Region. The key technical contributor from Steve Bain's SDC group was Larry McNeill. Irene Mazeiko and Bill DeLeo from Implementation Services assisted with development of user documentation.

More Information

Information on adaptation or reuse of this application in other prospect situations is available through the Transport Program. Contact SDC Programs, QC "MACE", or call 8*279-5585.

