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SPECTRUM

FOR THE EMPLOYEES OF GE INFORMATION SERVICES COMPANY

cover story

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INFORMATION
SERVICES

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

SUPPORTING SAIL AMERICA: TAKING A NEW TACK

General Electric Information Services Company will be providing both QUIK-COMM™ System electronic mailbox services and QUIK-GRAM™ Service to the non-profit Sail America Foundation during the America's Cup Challenge '87, qualifying the company as a Corporate Crew Member. This contribution includes use of the company's worldwide teleprocessing network to link the San Diego Yacht Club's entry in the races—the 12-meter sailboat **Stars and Stripes**, now camped in Fremantle, near Perth, Australia on the western coast—to its support personnel in the United States.

In September 1983, the Australians' secretly designed winged-keel boat, **Australia II**, defied all odds to win the seventh and final race with the American defender **Liberty** by a slim 41 seconds, breaking the longest winning record for any sporting event: the America's Cup had resided with the US for 132 years prior to the **Australia II**'s victory. **Stars and Stripes**, skippered by Dennis Conner, is considered one of the top American challengers in the battle to win back the America's Cup from Australia.

This is the first time that GE Information Services has offered support of this magnitude as a public service to a non-profit venture. "We are proud to provide what Sail America has dubbed **Stars and Stripes NET**," says Tony Craig, President of GE Information Services. "We identify closely with Sail America's theme—America Can Win with America's Best. We're all rooting for the **Stars and Stripes** to bring home the Cup, although our employees

in other US cities and other countries that are fielding challengers may have divided loyalties."

Sail America will use the QUIK-COMM System to communicate among the Sail America Foundation's main office (San Diego), the **Stars and Stripes** camp (Fremantle), and boat designers, scientists, and support groups across the US. Sail America's main office will use QUIK-GRAM to provide race updates and other information to donors, corporate sponsors, and the US news media covering the America's Cup Challenge '87. The bottom of each QUIK-GRAM from Sail America will carry the message: This exclusive news from Dennis Conner's **Stars and Stripes** Camp is brought to you as a public service by General Electric Information Services Company."

The idea for supporting America's Cup challengers, appropriately enough, came from Nick



On the Cover: **Stars and Stripes** practices for the America's Cup challenger round robin series.

The **Stars and Stripes** Corporate Crew logo will accompany updates on the America's Cup in SPECTRUM.



The company's Sail America support team includes (from left to right): Steve Haracznak, David Page, Audrey Bashkin, and Bill Beckley.

Lethbridge, a GE Information Services Business Consultant based in Perth, Australia. Lethbridge contacted Ray Marshall (Senior Vice President, Technology Operations), whose nautical office testifies to the soft spot in his heart for sailing races.

"GE Information Services' worldwide network is a natural for providing instantaneous communication for America's Cup challengers to their sponsoring country," Marshall explains. "A marriage between our leading technology and perhaps the most important sailing event of the decade was just too good to pass up."

As the idea gained momentum, an America's Cup support team was formed, including David Page, Manager, Office Services Marketing; Steve Haracznak, Senior Communications Specialist, Press Relations; Bill Beckley, Manager, Sales/Marketing Systems; Rand Walker, Sales Integration Manager; and Audrey Bashkin, Messaging Products Specialist. The offer of QUIK-

COMM and QUIK-GRAM support was made to all US challengers, but only Sail America signed on with the GE Information Services crew.

Sail America found the offer particularly attractive for several reasons: the Foundation already had been using GTE Telemail to the



Stars and Stripes

tune of several thousand dollars per month and had some creative ideas about expanding its usage of such services. Moreover, advanced electronic communications fit in well with the Foundation's high-tech theme (the **Stars and Stripes** hull was designed using CAD/CAM capabilities), and its "America Can Win with America's Best" motto fit well with the "can do" spirit in GE. Charles Ward, marketing director for the Sail America Foundation, reports, "This communications service...fits right in with the high-tech development efforts used by Sail America in our boat and keel design program." In addition, the

Sail America support groups were widely dispersed in geography and time, so such electronic communications were deemed nearly essential to a smoothly functioning camp.

As a Corporate Crew Member, GE Information Services receives a number of benefits—for example, the Sail America newsletter, travel discounts, race-viewing privileges on **Stars and Stripes** observation yachts, access to camp facilities in Australia (and previously in the training camp in Hawaii), a Record of Participation in a special section of Sail America's Logbook for the America's Cup Challenge '87, participation in certain Sail America advertising and

SALES PERSONNEL VIE FOR TRIP TO AUSTRALIA AND AMERICA'S CUP FINAL IN "QUEST FOR AMERICA'S BEST"

In a bid to create excitement with the introduction of PC Mailbox Version 3.0 and to leverage the opportunity presented by the company's unique relationship with Sail America, Office Services Marketing and US Sales are sponsoring a "Quest for America's Best" contest for all US sales personnel.

The winner and his or her guest will become members of the **Stars and Stripes** 1000 Club and will receive an all-expenses-paid trip to Fremantle, Australia, to view the finals of the America's Cup Challenge '87 (January 28-February 7) from the deck of one of Sail America's 12-meter observation yachts, join in crew cookouts, and attend various Sail America events.

The contest winner will be determined by tallying all sales of PC Mailbox 3.0 actually shipped between the October 15 product commercialization and December 31 and identifying the sales representative who sold the most copies (measured by software sales revenue). The winner will be announced in early January. All sales representatives who sell five or more copies of PC Mailbox 3.0 during the contest will receive golf shirts with the America's Cup Challenge '87 emblem.

THE AMERICA'S CUP: THE RACE, THE CHALLENGE

The America's Cup, originally known as the 100 Guineas Cup, was won by the schooner **America** in 1851, when she outraced an entire British squadron of yachts around the Isle of Wight. In honor of that triumph, the trophy was renamed the America's Cup.

Held every three years, the 1986 five-month America's Cup competition is being held in the Indian Ocean off Fremantle in western Australia, a site noted for strong winds that often reach 28-30 knots in the afternoon. Four Australian boats are vying for the right to defend the Cup, and 13 yachts are competing for the right to challenge the Australian victor.

Each of the two groups competes in a series of three round robins (over 400 races for all the competing boats). Winners of individual 24-mile races—laid out in a triangular course with eight legs—are awarded points: 1 point for each win in the first round robin, 5 points for each win in the second, and 12 points for each win in the third. The four yachts with the highest number of points in the Luis Vuitton Challenger Races will go into the semifinals, and the winner of that final will challenge the winner of the Australian round-robin series for the America's Cup in a best-of-seven competition in January.

The competitors represent 17 syndicates; most built 2-3 boats specifically for the America's Cup. Competitors and their stablemates total 31 12-meter yachts, which actually measure about 60 feet in length. The 12-meter designation refers to a formula that encompasses sail and hull size, with the numbers

in the equation always equalling 12—this formula seeks to equalize boats' speed-producing factors while simultaneously permitting design improvements.

The syndicates have invested approximately \$200 million preparing for this year's America's Cup. Each of the American syndicates operates on a budget of \$7-15 million. All 19 competing yachts have secret, closely protected designs, but each incorporates some version of the winged keel that constituted **Australia II**'s key to victory in 1983. Many yacht racing experts contend that this change in design has substantially increased the time and funds required to prepare for the Cup.

At the time this issue of SPECTRUM goes to press, **Stars and Stripes** is in a three-way tie (all are 11-1) at the end of the first round robin of the challenger series. **New Zealand**, beaten only by **Stars and Stripes**, has a controversial fiberglass construction (the first time fiberglass has been used in a Cup competitor). **America II**, the New York Yacht Club challenger, has lost only to **New Zealand** and is the only boat to beat **Stars and Stripes** in a nip-and-tuck race decided by a 33-second margin.

Stars and Stripes is skippered by Dennis Conner, who won the 1980 Cup and lost in the finals in 1983. Conner has more Cup experience than any other skipper in this year's competition. The veteran crew of 11 unpaid volunteers has over 15 years of experience in Cup racing. Sail America began racing its stable of boats last October to determine the syndicate's entry, sailing in Hawaiian waters (near Honolulu for light seas and wind and off Diamond or Koko Head for more challenging conditions).

promotion campaigns, and the right to use the **Stars and Stripes** Corporate Crew logo.

Perhaps more importantly, the company's participation helps position GE Information Services as a high-tech provider of specialized electronic mail services with a commitment to the product. The

company plans to leverage its relationship with Sail America as part of a total marketing campaign for office and electronic mail services. In addition, GE Information Services will use its Corporate Crew Member privileges to help build client relationships. Moreover, if **Stars and Stripes** advances toward or makes the finals, the company stands to gain substantial positive public relations exposure.

Watch for updates on **Stars and Stripes** and the America's Cup Challenge '87 in your local sports pages. Also, as long as the **Stars and Stripes** is plying Australian waves, you'll read more about her progress in future issues of SPECTRUM; in Rockville, the Electronic Bulletin Board will carry more frequent updates.

If you're interested in **Stars and Stripes** and America's Cup souvenirs—T-shirts, mugs, watches, and the like—you can order a catalog that details the wide-ranging souvenirs available by writing to: America's Cup Collection, P.O. Box 127989, San Diego, CA 92112. ▲



Stars and Stripes and one of her stablemates in Sail America are shown in early practice races off the California coast.

THE PRESIDENT'S NEW DIRECT REPORTS

Under the new internal organization reported in the Special Edition of SPECTRUM (October 3, 1986), four of the Vice Presidents reporting to Tony Craig did not previously report to the President of GE Information Services. For employees' information, brief biographical profiles of each of the four appear below.

Denis Gagnon



Denis Gagnon

Denis Gagnon (Vice President, Planning & Business Development) has 14 years of management, marketing, electronic data processing, and financial experience in the retail, manufacturing, and computer industries, with assignments in the US, Europe, Mexico, and Canada for companies such as Sears World Trade and The Stanley Works.

Gagnon joined GE Information Services in 1984 as VP & GM of Business Development and Ventures, responsible for programs such as distribution agreements, the Value Added Supplier Program (VASP), and the Multi-Country Service Supplement (MCSS).

In his new position, Gagnon will have five major areas of responsibility on a worldwide basis: new business ventures, business planning/market and competitive analyses, PTT relationships, distribution development, and pricing and contracts.

Gagnon notes, "The new organization reflects increased commitment to the business development function and its contribution to the growth of GE Information Services. Following an initial focus on the geographic expansion of the company's distribution activity, the business development efforts will now concentrate more strongly on strengthening and leveraging GE Information Services' major capabilities into new growth arenas."

Gagnon holds a BA in mathematics from Laval University (Quebec), a BCOMM in finance from McGill University (Montreal), and an MBA from the Harvard Business School.

Daniel Schultz



Daniel Schultz

Danny Schultz (Vice President, International Distributors and Northern Operations) has served 23 years in the computer industry, with assignments in the US, Europe, and North Africa for companies such as Data General, Perkin-Elmer and X-Data, its own computer system company. His management background includes hardware and software design and manufacture, sales and marketing of hardware and software, and ten years of general management with full profit and loss responsibilities.

A GE Information Services employee since 1980, Schultz successfully repositioned the French, Belgian, and Dutch companies in his first assignments. In 1984, he became VP & GM of Northern Europe, assuming responsibility for 13 countries.

In his new post, Schultz is responsible for the distributors in Europe, Asia Pacific, Latin America, and Canada and for the national operations in Britain, Ireland, Australia, and Scandinavia.

Schultz says, "Our objective is to use our highly qualified business professionals to create a well supported and strongly managed international distributor network so as to create a 'community of distributors' with common business objectives that are in line with the company's global strategy and in harmony with our subsidiaries and that will make a major contribution to the company's growth objective. In the international distributor organization, the leitmotif for the coming year will be: There is no growth like profitable growth."

Schultz was born and educated in France. He is qualified in Advanced Engineering and Electronics from the Ecole Centrale d'Electronique de Paris and in Computer Studies from the CNAM Paris University. He also holds an MA in Business Administration CPA from the Chambre de Commerce de Paris.

John Sidgmore



John Sidgmore

John Sidgmore (Vice President, US Sales and Services) has been with GE Information Services for 12 years, with prior experience at Rockwell International and Litton Industries.

Sidgmore started as Manager of the Connecticut Branch, moving up to Manager of the National Communications District in 1979

Photo by Bill Mitchell

and assuming responsibility for National Accounts in 1982. In 1984, he became Eastern Area VP and then in 1985 VP & GM for the US Sales and Services Operation, responsible for US sales strategy and staff.

In his new position, Sidgmore retains authority over US sales but reports to the President rather than to the head of Marketing. "Our objective is to continue to focus on building our new businesses and to concentrate particularly on implementation and execution issues that these new businesses pose," Sidgmore says. "We have proven that the market is there, and we have the talent and the fundamental strengths required to make this new business successful."

Sidgmore holds a BA in economics from the State University of New York.

Giuliano Venturi



Giuliano Venturi

Giuliano Venturi (Vice President, European Sales) has 14 years of experience in tele-processing services.

He received his doctorate in mechanical engineering at the University of Padua, and he began his career in the automotive and aerospace industries in Europe, designing and managing complex computer control systems in large-scale automated processes.

Venturi joined Honeywell Information Services Division in 1972, moving on to ADP in 1975 as general manager. He joined GE Information Services in 1979 as Marketing and SDC Manager for Italy, where he expanded his responsibilities into Spain, Switzerland, and Austria. In 1983, he became the International Marketing Program Manager based in London, and one year later he assumed VP & GM responsibility for southern Europe.

Assessing his new post, Venturi says, "The boundaries to computing when I first started in this industry have been surpassed a hundredfold. I am privileged to be responsible for a proven team that will make today's dreams the reality of business before the turn of the century. I will place a lot of emphasis on uniting the individual potentials of my staff and countries into a creative, effective, profitable whole." ▲

BUSINESSTALK™ 4.0 CELEBRATED ON BAY CRUISE

Applications Engineering in Berkeley and Applications Marketing in Dublin, California, jointly sponsored a dinner cruise on San Francisco Bay to celebrate the efforts of the BusinessTalk project team, which produced the recently released BusinessTalk 4.0, the first version with an IBM PC front end. Cruisers from Berkeley and Dublin were joined by managers from headquarters, Palo Alto sales representatives, SDC staff who helped develop the product, and key AppleLink and BusinessTalk people from Apple Computer, Inc., in Cupertino.

All 50 team members in Rockville, Nashville, Chicago, and California—including the 28 who could make the cruise—received a personalized folder commemorating the BusinessTalk 4.0 team effort.

According to Kent Schwab (Microprocessor Systems Manager), "BusinessTalk 4.0 is the latest version of a product based upon the BusinessTalk system jointly developed by Apple Computer and GE Information Services. BusinessTalk 4.0 marries MARK III services with a consistent, user-friendly interface on both the IBM PC and the Apple™ Macintosh™. BusinessTalk always has been as much a marriage of people from many organizations as a marriage of technologies, and that's the spirit we celebrated on the Bay." ▲



From left to right, Marty Reese (Manager, Microcomputer Products), Cyndy Britton (Administrator, Microprocessor Systems), and Maria Freitas (Project Manager) prepare to cast off for a celebratory Bay cruise.

WORKIN' ON...THE NIGHT SHIFT

Throughout GE Information Services, hundreds of employees work round the clock to serve clients. Practically every group is staffed with people whose lunch hour is 4 a.m. or who live with a company-provided family member — the beeper.

Groups with the highest percentage of after-hours employees include Supercenters, Network Distribution Centers (NDCs), and Client Services. Even people in groups such as US Sales, however, are not insulated from the 5 a.m. call from clients grown accustomed to one-on-one business relationships.

Florence Chang (Senior Technical Representative, San Francisco) handles some ten accounts, including Wells Fargo Bank. It's not unusual for her to get calls from the bank in the wee hours of the morning.

"If there's a file transmittal problem—regardless of when—the operators call me," she says. "Today at 5 a.m., a priority file wasn't transmitting because it didn't have the proper trailers, and they had a deadline. They feel more comfortable knowing they can reach me. I'm a kind of security blanket for them."

Employee Glenn Oetzel (Long Beach NDC) can hardly remember what it's like to have an eight-to-five job. He's been working odd hours for more than 25 years to keep the network up for West Coast clients.

Currently a Senior Network Distribution Specialist, Oetzel has been living on call since before the days of beepers, when married employees were most likely to be called out to handle an emergency, "because they were usually the ones who were home," Oetzel recalls.

He's been called out after midnight on numerous occasions, had a Thanksgiving feast interrupted, and been tempted (but never succumbed) to ignore ringing phones on Saturday evenings during dinner. His greatest adventure was during the late 1960s, while recovering from a bout with influenza.

"We had a node go down in Kellogg, Idaho," Oetzel remembers. "I wasn't feeling very well, but there was no one else. So I flew to Spokane, Washington, rented a car, and drove to Kellogg. It was the dead of winter, snowing like crazy, and I was worried about getting back to Spokane. Our equipment was at a TV repairman's office then. There was no heat, and it was 22 below zero inside where the equipment was."

Morris Keranen (Senior NDC Specialist, Oyster Point, California), notes, "All the problems seem to happen at 10 o'clock when you're watching the news and getting ready for bed."

Situations like that must make some employees wonder if there isn't a better way to make a living. But, in fact, many who work after hours wouldn't think of going back to an eight-to-five world. In addition to the extra pay, there are other benefits.

Terri Waterbury (Operator Specialist, Long Beach Automated Clearing House [ACH] Service Center) has worked evenings since 1979, first with Northrup Corporation and for the past year with GE Information Services on second shift (4 p.m. to 12:30 a.m.).

Her husband Donald works second shift, too, at Northrup. When she first started working for the ACH Service Center, she accepted a day shift assignment. Her husband's hours were such that their paths crossed infrequently. "We'd practically have to make an appointment to see each other," she says. "I love these hours. I have plenty of time to do things in the morning; and in winter, I don't have to hear the alarm clock go off when it's dark and cold outside."

Other employees have mixed feelings about working after the sun goes down, particularly those working third (graveyard) shift.

Chuck Leighton (Operations Specialist, Brook Park), an eight-year company veteran, worked the past three years on third shift but has experience on all three.

"The heavy customer load on first shift prevents you from experimenting and second emphasizes recordkeeping and billing. Third is the shift that gives you latitude to try different things," he feels. "If you think something's wrong, you don't hesitate to take it down and fix it."

But, Leighton says, it's difficult to sleep during the day when the work is completed. Telephones ring and lawn mowers intrude.



It's 12:37 a.m., and Mike Higgins is leaving the Brook Park Supercenter on a two-mile bike ride to his home in a nearby suburb of Cleveland.

Leighton says he'd prefer a shift rotation so that he could enjoy the variety the three shifts offer.

Leighton's colleague Mike Higgins (Senior Computer Operator, Brook Park) prefers second shift, because he can babysit his three younger children and get the older one off to school while his wife Debbie works days. At 8 p.m. every night, the six of them share dinner in the Supercenter's parking lot.

Although some employees don't like second shift—it interferes with social lives—it's clearly third shift that generates the most complaints. While the majority of employees say they like the third shift environment—fewer telephones ringing, fewer managers looking over their shoulders—many find it's tough to get a good "night's" sleep. As Brook Park's Pat Gagen (Operations Specialist) describes it, "You're in a kind of permanent jet lag."

John Boyd (Operations Supervisor, Client Services, Rockville) has worked third shift for ten years but reports, "You never really adjust from work week to weekends, the changing sleeping patterns. You just convince yourself it's not a bad shift. You've got to have a strong mental attitude to work off hours."

Earl Parkinson (Coordinator for the Oyster Point, California, ACH Service Center), who has worked third shift for only a few months, puts it more succinctly. "Whoever invented graveyard ought to be shot. Working third takes strong cohesiveness with a small group. It's strenuous, and you have to have strong concentration."

Working after hours is stressful for some, while others wouldn't have it any other way. But all cope with working while most of the world sleeps, taking satisfaction in knowing they're critical to keeping wheels turning every minute of the year. Whenever a client logs on, the network will respond; whenever a client calls for help, someone will be there. ▲



At the Long Beach NDC, Glenn Oetzel (foreground), Senior ND Specialist, monitors the network serving southern California, Arizona, and Utah. With him is ND Specialist Tom Byars, who shares on-call duties with Oetzel and Senior ND Specialist Jim Warden (not shown).

ELFUN SOCIETY HONORS SENESE

The General Electric Elfun Society, a volunteer organization of GE employees, recently honored Gary Senese (Manager, MARK 3000™ Engineering) for his administrative support over the past several years for Ski for Light, a non-profit group that annually sponsors a week-long program that teaches blind people to ski.



Gary Senese is pictured with his Elfun Society plaque.

Senese developed and administers a MARK 3000 membership processing system for Ski for Light—a service he had performed for associations while at a local services bureau prior to coming to GE Information Services. The

membership processing system maintains the participant lists of roughly 150 people each year, generating mailing labels and keeping track of data such as dietary requirements, travel needs and plans, emergency contacts, and many other personal details.

"This was a chance to use my knowledge of membership systems and MARK 3000 capabilities to help a really unique and valuable organization," Senese says. "I've never regretted volunteering my time."

Ski for Light lives by its motto: Blind People Learning to Live by Learning to Ski. Each winter since 1975, Ski for Light has paired more than 250 sighted and blind skiers from the US—and a few participants from Norway, Japan, Canada, France, and other countries—at sites throughout the US, such as Lake Placid, Squaw Valley, and the Black Hills. The sighted skiers teach basic skiing skills by guiding blind students (from ages 18 to 72) down parallel ski tracks specially laid out for the program. The paired skiers also share educational, cultural, and social programs off the trails.

By providing an opportunity to learn a physically demanding sport in a relaxed and supportive environment, Ski for Light enables blind people to approach life "in a new light," encouraging self-confidence, outdoor exercise, and happier lifestyles. Alumni from the program have launched more than 25 regional Ski for Light and Healthsports programs. Moreover, the sighted participants learn, as one guide noted, "The only difference between guides and the people here who are blind is that they can't see." ▲

INTERVIEW: DR. YUKIO MIZUNO

[Recently Larry Geller (Senior Vice President, C&C International) conducted an interview for SPECTRUM with Dr. Yukio Mizuno, Senior Vice President and Director of NEC Corporation and President of C&C International, the joint venture formed by GE and NEC last year. The interview is translated from the original Japanese.]

NEC

Q: Can you explain NEC's slogan, C&C—Computers and Communications?

A: NEC now ranks seventh in the world in sales of computers and fifth in communications systems. If these two techniques are merged, it is possible to create an entirely new system, which we refer to as

C&C. As we move from an industry-oriented society towards an information-oriented society, I believe that C&C will be a useful part of the infrastructure of that society.



Dr. Yukio Mizuno

Q: Since GE Information Services started using the System 1000 (DPS-90) computers, NEC has developed even larger, faster models. Can you update us?

A: The System 2000, three to four times more powerful than the current System 1000, already has been released. We anticipate that a computer that is three to four times more powerful even than the System 2000 will be developed in several years. With regard to special high-speed computers, we already are producing a super computer capable of 1.3 gigaflops.

Q: NEC is known as a world leader in semiconductor and electronics manufacturing. How important will the services business be to NEC in the future?

A: The service business is an important new area for NEC. We will be promoting this area in addition to our current semiconductor and electronics businesses. The four pillars of our business in the future will be the computer, communications, electronic devices, and services.

Q: How extensive is the VAN network that NEC is constructing this year?

A: In 1986, NEC will establish 200 access points in Japan. In addition, ten communications centers and three computer centers will be provided in Tokyo, Osaka, and Nagoya. About 25 large computers will be installed in these centers to provide service. Within the network, communication channels of about 200 megabits will be used.

Q: What additional capabilities will be possible in Japan when that network is connected with GE Information Services' MARK*NET™?

A: At present, NEC's network is limited to Japan. By connecting to your extensive network, we can offer a complete worldwide teleprocessing service to our users.

Q: Can you describe some of the domestic services NEC will be offering?

A: In Japan, we offer packet switching facilities, circuit switching facilities similar to one-to-one telephone circuit connections, packet virtual circuits, and part-period circuit leases for communication-related services. In the future, electronic mail, data base access, and satellite-based TV systems will be implemented. Starting this October, we also will offer automatic machine translation from Japanese to English.

Q: How is your sales force organized?

A: Both domestic and international sales are actually handled by our Information Processing group. There are sales divisions for each industry, and the salesmen participate in both domestic and international sales activities for their industries. The VAN group provides sales support to these divisions. The sales promotion group within the VAN group supports each industry division and draws up the actual contracts. There are now about 50 people in the VAN group.

Any NEC salesman can, in fact, sell telecommunications services. For instance, the sales division

NEC

NEC has been a distributor of GE Information Services products in Japan since August 26, 1986, and has invested over \$350 million to construct its own domestic network, NEC-Net, which connects to MARK*NET through two back-to-back gateway processors.

Of course, NEC also has its own independent position of leadership in Japanese industry as a manufacturer of semiconductors, computers, and electronics. NEC's service, C&C VAN, encompasses and integrates both domestic and international VAN and information processing services, so a NEC salesman is uniquely able to provide for the customer's every requirement—service, hardware, and software.

responsible for government-related business handles the Maritime Safety Agency, which is not a navy authority but a kind of sea police. The distribution division takes charge of air cargo service businesses and sells teleprocessing services to them.

Q: What role does C&C International play?

A: C&C International is a vehicle by which GE Information Services and NEC cooperate, and it also provides consultation. For example, C&C International is concerned with the training of salesmen based on GE Information Services' experience, the mutual coordination of products offered over GE Information Services' worldwide network, and the products of C&C VAN service in Japan. C&C International consultation will help us to obtain even greater value from the interconnection of the two networks.

Q: Is there any plan to offer Aladdin, NEC's in-house office automation system, commercially?

A: We are putting Aladdin onto personal computers and thinking of adding it to the VAN service. Because it runs under MS-DOS, applications in the US such as WordStar can be integrated into Aladdin without modification. I think it should be quite useful overseas.

In London 750 years ago...an office of international trade...[would be] on the first floor and a dwelling on the second floor—a home office. As the office developed, it came to the town, and people came there from their homes. With the development of computer communication, people will be able to work at their homes as they did 750 years ago.

Q: Would you comment on the generally held belief that Japan still lags behind the US in software development?

A: Currently there are about 450,000 to 460,000 software programmers in Japan and 1,200,000 to 1,300,000 in the US, or about one-third of the volume of software work. In Japan, car production and car and steel factory control systems are more advanced than in the US, while software for the nuclear power, aerospace, and aircraft industries is much further advanced in the US. Applications such as automatic fingerprint identification (the AFIS system) are more sophisticated in Japan, and they have been exported to San Francisco, Chicago, and Canada, where they have proven useful in police offices, for example.



Larry Geller (right) interviews Dr. Mizuno.

The Future of Office Computers

Q: How do you use information systems in your daily work?

A: I use NEC's management information system, which provides order information, sales reports, and a general economic summary prepared for all executives by our Information Center. Since image processing is a feature of this system, I also can view newspaper clippings directly on the screen.

Q: How do you think the office of the future—the next 5-10 years—will use computers and communications?

A: We hope to improve the input methods of office systems. Voice input and other new input/output systems will support more sophisticated office systems.

Satellite offices will increase in the future: an office will be located in a community center, for example, to be used freely anytime by any employee. People will be able to work at satellite offices conveniently located near their houses.

There is no manager in such an office, only office automation hardware devices. It is connected to headquarters by an on-line system. Such satellite offices separated from the home office will increase gradually.

Another possibility will be the car (or moving) office. More and more office equipment is going into cars, which will require only a single phone line. We already have such cars: salesmen who visit hospitals to sell medicines input the order to a portable terminal and then transmit the information to the center by radio from their cars. By the time a salesman returns to his home office, the ordered items have been packed to be sent out immediately. Such moving offices will increase.

Another possibility is the home office, though it would be difficult in Japan. The origin of the word office is the Latin *officium*, but the word was born in London 750 years ago, meaning an office of international trade. In those days, there was an office on the first floor and a dwelling on the second floor—a home

C&C INTERNATIONAL

C&C International, Limited, recently celebrated its first anniversary. Formed as a joint venture between GE and NEC, C&C International provides marketing and sales support to NEC and promotes jointly offered international services. When then-President Walt Williams and NEC President Tadahiro Sekimoto conducted a simultaneous signing ceremony, facing the teleconferencing TV cameras in August 1985 on opposite sides of the Pacific, they created both the joint venture and GE Information Services' second distributor in Japan.

An opening ceremony on October 1, 1985, in a television studio was SRO and featured demonstrations of GE Information Services products, NEC's VAN, and a simultaneous translation of Mike Chapman's speech via teletex on a giant screen behind him.

C&C International also coordinates joint projects that should bring GE Information Services' experience and network service capabilities into play with NEC's computer and communications expertise to produce new service offerings in the near future. Current projects include handling facsimile on the network, which may trigger a new way of data delivery. NEC also is just installing the first customers in Japan, the US, and Taiwan onto its Kanji QUIK-COMM™ System product.



From left to right, Larry Geller, Michiko Misaki (Administrator), and Shun Kaneko (Senior Vice President) of C&C International review on-line data.

C&C International now is publicizing its TRADE-VAN project, an overall umbrella that will encompass GE Information Services' EDI services (such as EDI*EXPRESS™ and TRADE*EXPRESS™), a tariff data base, ship scheduling and booking, credit verification, ship tracking, and shipping news services.

office. As the office developed, it came to the town, and people came there from their homes. With the development of computer communication, people will be able to work at their homes as they did 750 years ago.

Q: What new developments do you expect in telecommunications in the next five years?

A: The telephone and personal computer will become integrated into a single unit, the telepasso [telephone and personal computer abbreviated in Japanese]. The telepasso will become just as indispensable to modern home life as the washing machine or refrigerator.

Up to now, voice communication has been most common, but the advent of personal computer communication and new communication media will make new applications such as electronic bulletin boards and electronic mail widely available. Using the telepasso and electronic bulletin boards, it is possible to post a notice for people with whom you are not acquainted. Thus, the range of the community is greatly expanded.

Initially, this would be limited to the domestic area, but gradually it would expand to include the international scene, I would think.

One application for which telepasso would be valuable is educational systems, computer-aided instruction (CAI) systems to be used in the home. One famous Japanese private study school is now planning a home CAI system that will be used for the education of over one million students.

If the telepasso is to be used overseas, the language problem becomes important. C&C VAN is planning to start an automatic translation service this autumn. At first, electronic mail will be passed through the system and translated into other languages. Next—perhaps 20 years or more in the future—phone conversations will be automatically translated in spoken form and come out at the other end of the line as translated speech.

This year a national project to achieve this capability has started in Japan. If successful, communication among people of different countries can be furthered through the information network, ideas can be exchanged among them, and their ways of thinking can be understood so that world peace can be advanced. ▲

BOTTOM LINE

GE

GE's company-wide earnings of \$604 million for the third quarter of 1986 were 5 percent higher than for the same months in 1985. Sales of \$9.28 billion were up 42 percent, largely because of RCA components that had no counterpart in GE's 1985 operations. Profits, measured by net earnings as a percentage of sales, were 6.5 percent. Third-quarter earnings per share were \$1.32, compared with \$1.26 for the 1985 period. GE shareowners will receive a dividend of 58 cents per share of stock in late October.

Earnings for the first nine months of 1986 were \$1.762 billion, or 5 percent more than the first three quarters of 1985. Sales for the first nine months of 1986 were \$22.94 billion, 17 percent higher than 1985. Earnings per share were \$3.86 for the first nine months of 1986, compared with \$3.68 in 1985.

GE's third-quarter 1986 net earnings included \$99 million from RCA operations before estimated acquisition costs, and GE's sales included \$2.31 billion from RCA. Since the merger on June 1, RCA's earnings totaled \$135 million and about offset acquisition costs, producing no dilution in earnings per share; RCA sales added \$3.11 billion to GE's total sales.

Performance by industry segment is summarized below; RCA results are discussed separately and are not reflected in the industry segment summary.

- o Consumer products, major appliances, aircraft engines, medical systems, and aerospace posted increases in earnings over last year.

- o Industrial products, power systems, materials, and information services reported lower earnings compared to last year.

- o Financial services earnings were about the same as last year.

- o In RCA—excluding acquisition costs—NBC and the aerospace, defense, and solid state businesses increased earnings.

Welch reports, "Rapid progress has been made toward achieving the potential of the RCA acquisition....Integration of a number of compatible GE and RCA businesses is well underway. Also, we have begun to dispose of certain businesses...that are not in keeping with GE's strategic objectives.

"The benefits of other major acquisitions were also apparent: Employers Reinsurance Corporation contributed significantly to GE's earnings, and Kidder,

Peabody earnings more than covered acquisition costs in the first full quarter of GE's ownership. The recently completed Medical Systems acquisition of certain Technicare assets and the pending factory automation joint venture with Fanuc will complement and strengthen GE's existing business base to provide even greater opportunities for improved profitability."

GE Information Services

Third-quarter sales for the pre-reorganization GE Information Services totaled \$119 million, 5 percent below the prior year and 9 percent lower than Operating Plan. Volume declines across most components were partially offset by favorable exchange rates.

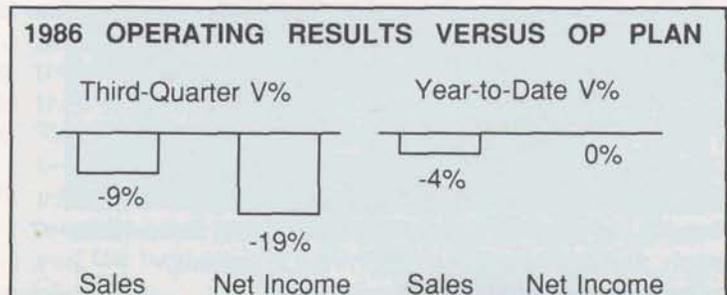
Net income of \$4 million was down 50 percent from 1985 and was 19 percent below Operating Plan, as reduced costs, favorable exchange rates, and lower tax rates were not sufficient to offset the volume shortfall. Third-quarter results by business are summarized below.

- o Network Based Services (the new GE Information Services in the reorganization) was 7 percent under Plan, with domestic revenue off 15 percent as new business growth was slower than anticipated and not sufficient to offset the decline in Remote Computing Services base business. International revenue was up 3 percent because of favorable exchange rates. Earnings were higher than Plan, as cost reductions and deferrals, favorable exchange, and lower affiliate taxes more than offset the volume miss.

- o GE Consulting Services sales (down 13 percent) continued to underrun Plan because of lower volume and fewer billable contract personnel. Net income fell significantly below Plan because of lower sales.

- o Software International revenue was 20 percent below Plan, mainly because of lower domestic volume. Earnings were down substantially because of the revenue shortfall.

For the first nine months, net income for the three combined businesses was slightly above Plan on 4 percent lower sales. The chart shown below displays third-quarter and year-to-date sales and net income compared with the Operating Plan. ▲



GOOD NEWS

Continental Grain Company

Continental Grain Company, a privately held commodities trading company with annual revenues of about \$13 billion, selected GE Information Services as its worldwide data communications vendor. GE Information Services will connect users in 40 countries around the world through: (1) an SDC-built on-line interface to an in-house messaging service; (2) PC Mailbox; (3) Orion software on 3X machine; and (4) an interface to a local area network (LAN). Users ultimately will be able to send messages and files throughout this worldwide network across several messaging systems in an on-line environment.

Jack Goldberg (Account Executive) notes, "GE Information Services was selected because of our extensive network, electronic mail capabilities, worldwide support, and software development organization. The efforts of New York Commercial Region Manager George Alber, New York SDC Manager Izy Franco, and Paul Inserra and the Major Opportunities group were all key to winning this major order. This opportunity confirms that GE Information Services has all the capabilities needed to support the worldwide data communications needs of major international businesses."

Mach Flinn (SDC/New York) is managing the development of the interface between the QUIK-COMM System on MARK III® Service and SYSM on the Continental Grain mainframe.

Evergreen International Corporation

In July, GE Information Services signed a contract with Evergreen—the operator and owner of the world's largest fleet of containerhips—agreeing to supply EDI capabilities for shipping documentation, container movement, and finance applications to



Following the signing, from left to right, David Rolls, Niels Nielsen, and Spencer Liu (Senior Vice President, Evergenius) toasted the accomplishment.

Evergreen offices in Japan, Taiwan, Hong Kong, and the US.

This contract is the first step in establishing a significant business relationship between the two companies. Demonstrating its esteem for GE Information Services, Evergreen invited the company to give a seminar on future trends in the transport business to 67 upper and middle Evergreen managers. Niels Nielsen (Manager, International Transport Marketing) conducted the seminar, hosted by Evergreen's Chief Executive Vice President, C.C. Cheng.

Founded in 1968 by Y.F. Chang, Evergreen gradually but consistently expanded its services and fleet, culminating in its highly publicized round-the-world service, which came on stream in July 1984. Evergreen containerhip service connects Taiwan with Southeast Asia and the Far East with Europe, the US east coast, the US west coast, the Caribbean, the Mediterranean, and the Red Sea.

Evergreen displays a unique corporate character: all buildings, trucks, ships, containers, desks, carpeting, and uniforms are green; the name of each of its roughly 60 ships begins with the word "Ever" (for example, Ever Gifted, Ever Valiant, Ever Onward, and Ever Forever); and its newly completed headquarters building is designed to represent a container (green, naturally).

The contract is a product of several factors. Evergreen's business strategy and service network is increasingly dependent on effective data processing and information services. In addition, GE Information Services built a relationship with the Evergreen group in the US, Europe, and the Far East, seeking to understand Evergreen's needs. In the final stages, the Hong Kong team, led by David Rolls (Manager, Hong Kong), worked closely with Evergreen's Taiwan headquarters to develop the freight documentation distribution system that Evergreen demanded.

Sze Wai Leung (Technical Services Manager, Hong Kong) and Ben Wong (Consultant) provided technical backup for the sale. Wong currently is project leader for system implementation, supported by GE Information Services offices in New York City, Los Angeles, and Tokyo.

After the contract signing ceremony, Rolls and Nielsen met with Evergreen President C.L. Lim, who is enthusiastic about the business relationship, particularly possibilities for controlling his almost 200,000-TEU fleet (TEU, or twenty equivalent unit, is a measure of container capacity). Nielsen reports that "this contract promises well for the development of other shipping and transportation opportunities in the Asia and Pacific areas."

Peugeot

GE Information Services signed its first US contract with Peugeot to provide application software

and connectivity for an automobile dealer communication system that will link the approximately 300 US Peugeot dealers.

Peugeot introduced (and GE Information Services demonstrated) the system to its dealers in early October at its 1987 Dealer Convention in New Orleans, where Peugeot previewed the new 1987 car models. The system got rave reviews and high levels of dealer acceptance, which will accelerate the introduction of the planned pilot to December 1986.

Richard Reiss (Senior Area Consultant, SDC Northeast and Project Manager for the Peugeot account) notes, "This contract will help establish our reputation in the dealer communications arena for the automobile industry." Communication system services for Peugeot will be driven by the dealer locations, where batch data entry can be done on PC front ends and then uploaded for evening processing. This approach will produce both cost and time savings, determined by the volume of Peugeot's dealer activities.

With this communications system, Peugeot dealers will be able to: (1) communicate via electronic mail with Peugeot headquarters and with other dealers; (2) electronically process and track warranty claims more quickly than under their manual system; (3) order parts on a daily basis, place an emergency parts order that would be turned around in one day, and obtain updates on parts and inventories within 24 hours (versus the current 2-3 weeks); (4) transmit data on car dispositions (sales, transfers, conversion to demonstrators); and (5) locate cars within their district or area in a matter of minutes.

Reiss reports, "Peugeot selected GE Information Services for several reasons: to enhance the visibility and dealer-perceived utility of corporate headquarters; to deal with a big-name company with staying power and a nationwide network; to implement a dealer communications system that is cost-effective—and our proposal on average undercuts all other dealer systems of which I'm aware; to tap our documentation, training, and client services capabilities; and to work with a company that is right across the street from Peugeot's headquarters."

Charlie Zeale is the Peugeot Account Manager. Paul Herzog (Project Manager) built the prototype system that originally was demonstrated to Peugeot. Eric Goberman (Project Manager)—with support from George Bottarini (Project Manager) and Beverly Powell (Senior Application Specialist)—adapted that prototype to Peugeot's needs, writing the application software necessary to run the system. Jan Kunz (Senior Training Specialist) produced the documentation required to train Peugeot dealers and will work directly with dealers to ensure adequate training.

PUBNET

In early October, GE Information Services signed a contract with the American Association of Publishers (AAP) to supply PUBNET, a publications ordering and inventory system to link 2,700 college bookstores nationwide with 30 college textbook publishers (including CBS, McGraw Hill, Macmillan, and Harcourt Brace Javonovich) that produce roughly 90 percent of all texts for the \$1.2-billion-per-year industry.

PUBNET is designed to prepare and transmit orders, confirm orders on a next-day basis, supply up-to-date information on publishers' prices and stock availability, and relay electronic mail among bookstores and publishers. System advantages should include fewer billing errors, easier ordering and order tracking, better title and availability information, and reduced costs. Users will be charged a one-time initiation fee and a monthly service fee.

The system pilot prototype is now under review. The first PUBNET pilot, serving two publishers and six college bookstores, will run for 60 days beginning in early December. The second 60-day pilot will begin in February and will include six publishers and 15-20 bookstores. In April 1987, PUBNET will be extended to all 2,700 bookstores and to the rest of the publishers, with a formal debut at the National Association of College Bookstores Convention in Anaheim.

Vince Iuzzolino (PUBNET Account Executive) reports, "AAP plans to roll the system out, probably late next year, to its 12,500 commercial bookstore members, maximizing return on its product development investment." Spurred by Macmillan's interest, AAP developed its own publishing industry BISAC document EDI standard, which PUBNET meets.

GE Information Services won the PUBNET contract with AAP after an open-bid competition that attracted 27 vendors. "We won," Iuzzolino says, "because AAP wanted one vendor to meet all its needs, demonstrate a strong local presence in the New York City area, offer an international network, supply high-quality EDI, and provide an E-mail capability."

Rudy Gawron (Technical Director, SDC) developed the technical and functional specifications for PUBNET in conjunction with Mike Beasley (Technical Project Manager) and with a lot of help from Mary DeTuerk (EDI Marketing Specialist). Norman Silverman (Project Manager) is writing the user demonstration and billing systems, Dick Darnell (Consulting Specialist) the publisher functions, and John Welch (Applications Programmer) the PC workstation and communication interfaces. The PUBNET team also received a great deal of assistance from Major Opportunities and from Legal (19 publishers helped pay for PUBNET development, requiring special contracts covering EDI, PSA, CSA, and the like).

Societe Generale

GE Information Services recently signed another contract with Societe Generale (SG), France's third largest national bank, with wide-ranging activities and branches in 66 countries. Under the new contract, GE Information Services is designing a funds transfer order system, a cash management system, and a new data exchange management application that enables 250-300 branch offices and customers to use the data exchange system eight hours each working day. To implement the latter application, GE Information Services is developing a new pricing system and a new access system, using PDN lines (TRANSPAC).

Since 1984, GE Information Services has enhanced its decade-long client relationship with SG by implementing MARK III applications such as cash management (project leaders: Andre Boico and Alain Sahuc), data exchange management (project leader: Bernard Ghenoff), and electronic mail (project leader: Frederic Nero). Charles Fodor (General Manager, France) maintains close working relationships with top SG management personnel.

The international cash management system provides about 50 corporate and bank treasurers in 12 worldwide locations daily access to the balance reporting of their accounts. Using the QUIK-COMM System and PC Mailbox, the electronic mail application enables SG headquarters staff to communicate with their offices in ten countries; two additional countries are being added each month.

The core data exchange management system is a unique application that links SG's dealing room to MARK III on a real-time basis, and the MARK III data base is immediately updated whenever any currency data are changed. SG branches and customers can access currency information, market analyses, and advisory services from a videotex terminal or an IBM PC. Branches and customers can enter data exchange orders, which are immediately printed into the dealing room.

This year, GE Information Services undertook several tactical sales activities, including: visits by SG executives to the Rockville and Amsterdam Supercenters; invitations to SG executives to attend Wimbledon and the Internationaux de France de Tennis; and an SG presentation on its applications at a banking workshop.

Ludovic Cohen-Zardi (Banking and Insurance, France) notes, "Our credibility at SG is the result of excellent teamwork inside and outside our country. We are now a part of SG's strategic development in France and in other countries, and GE Information Services people in the involved countries have made a significant contribution to this success." ▲

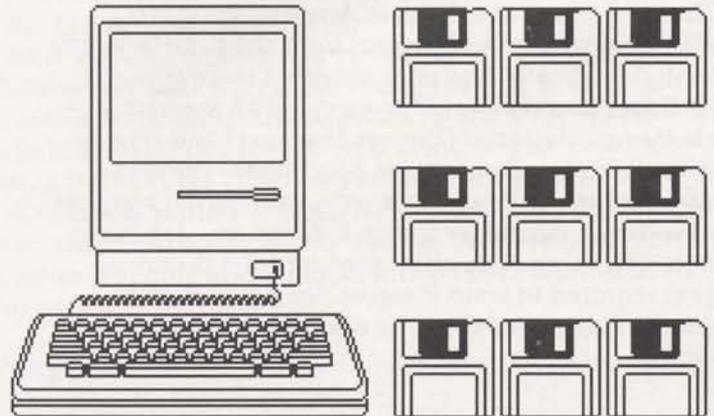
INDUSTRY BRIEFS

Knight-Ridder recently reported \$50.9 million in revenues for VU-TEXT on-line retrieval service from January through July, 12.1 percent higher than the comparable first seven months of 1985.

MCI Mail plans to introduce a new service that will allow users to receive binary data to produce graphics. Targeted at large-company users who make numerous presentations, the Computer Picture Service (Brilliant Image, Inc.) will accept data from 1-2-3, Symphony, Microsoft Chart, and other popular graphics software. Final graphics can be returned to the user the next day via express mail services.

McDonnell Douglas Information Systems' Ontyme announced a new X.400-based protocol, X.ONTYME, that uses a machine-to-machine interface when unattended electronic mail send and receive functions are required. The protocol takes less time to connect and is designed to interconnect with new customers' pre-existing private E-mail systems. Ontyme engineers will work with customers to develop bridges between Ontyme and PROFS or other local E-mail systems. Ontyme also has three other enhancements: PATHWAYS (which enables users to suspend a session, connect to any host in the Tymnet network, and bring files back to the Ontyme session), X.MODEM protocol, and a subject line in the E-mail messaging facility.

British Telecom's Dialcom recently upgraded the E-mail software licensed to 16 countries. The upgraded system, Mail400, is fully X.400-compatible, includes full directory capability, and incorporates improved user interface, access to Telex and facsimile, and a comprehensive directory system.



ITT World Communications, Inc., introduced Worldbridge Service, which permits simplified Telex messaging and data communications with non-compatible E-mail systems on computers of all sizes. The service is designed to link intracompany E-mail systems with public electronic messaging services.

Boeing Computer Systems (BCS) announced an alliance with **Scientific Computer Systems (SCS)**, based in San Diego, a manufacturer of near-super computers) to increase both companies' penetration into the engineering and scientific sectors. The agreement bundles SCS' Cray-compatible SCS-40 near-super computer with BCS' software and software support.

VISA has been testing a new credit card transaction authorization method that may lower costs by about 20 percent. The method requires additional data encoded on the magnetic strip on the back of the card and allows some authorizations at the merchant location.

CompuServe has an interconnection agreement with **Computer Services Corp. (CSC)**, which has its own 19-country network that can be accessed through Telex in 51 other countries. For \$20 more per hour, international CompuServe users will be able to use a local phone number and CompuServe ID and password to log on to the CSC network.

The **National Bureau of Standards** completed and approved the first version of a North American, industry-wide E-mail standard, which may soon precipitate a flood of E-mail service and products. The standard—Version 1.0—defines necessary protocols and technical specifications for products based on CCITTX.400 worldwide E-mail standard.

IBM recently announced that it will compete in the desktop publishing market, focusing on PCs but also addressing larger systems such as System 35 and IBM mainframes and using third-party hardware and software.

Micrografx, Inc., is expected to begin shipment of a clip-art library for Microsoft Windows. The company also announced a three-year, exclusive international agreement with **Microsoft** to distribute Micrografx' Windows Draw. Micrografx retains US distribution rights, and Microsoft translates Windows Draw into French and German initially and then private-labels the international product as Microsoft Windows Draw.

MBank of Houston recently began offering letters of credit via computer terminal, using a menu-driven system with on-screen instructions to speed up the application process by as much as several days. Users can access summary reports and use **MCI's** E-mail network to access the system. No software is required; the bank is not charging for the service.

Nippon Telegraph & Telephone plans to offer a new digital service that uses long packets of data—1,024 bytes and 4,096 bytes (the latter requiring either 9.6 or 48K bps links)—and should be 50 percent less expensive than current 128-byte packet-switching services.

K-Mart, the country's second largest retailer, announced plans to begin work on a \$40-million satellite network that will carry credit card authorization requests and responses between international headquarters (Troy, Michigan) and the 2,100 US stores. **GTE Spacenet** is responsible for getting the network in place and running by late 1990.

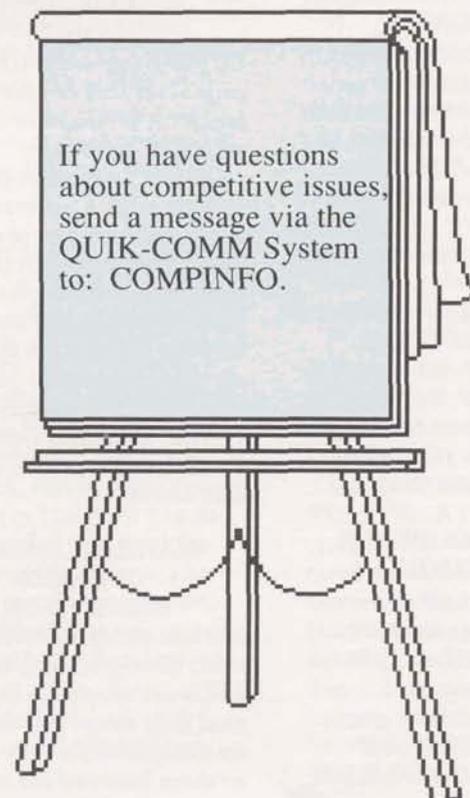
The **SEC** agreed to allow **Security Pacific** to operate an options trading system without registering as an exchange or a clearing agency. **GECC** is expected to act as guarantor of transactions to help alleviate federal banking regulatory concerns about risk.

Mercury Communications Ltd. announced its first international Telex service.

Computer Mail Services, Inc. (Southfield, Michigan) offers CMS Link, which allows MCI Mail subscribers to link personal computers and mainframe systems into a communications system based on MCI Mail.

Sepe, Inc., introduced Telesoft, a Telex management system running on IBM System 34, 36, and 38 minicomputers.

Grid Systems Corp. announced E-mail capabilities for its Gridserver file server, permitting users of its portable computers to access the file server from remote locations via telephone. ▲



ADMINISTRATION

SHEILA KIM KOREA

The Mailbox program said that the action I requested would have to be done by cost center 766. Who is it? How do I reach that office?

All you need do is send a message via the QUIK-COMM System to address CC766, and it will be delivered to the administrator at that office. Katie Shea (administrator for the GE accounts) hit upon the idea of making QK addresses from the cost center numbers. She has set up the revenue cost centers with a QK address of CCNNN, where NNN is the cost center number. Then she delegated that new address to the most-often accessed QK address in that office.

MARIETTA BAGLIERI CHICAGO

Whatever happened to the Business Products Warehouse that used to sell matchbooks, key chains, golf balls, and other remembrance advertising items?

It is no longer a part of the General Electric Company. The operation was sold to National Office Supply. You can reach them on 201-488-2900. I'm not sure if they have a new catalog and price sheet as yet, but you can call and ask them.

RANDY GOBLECK ARLINGTON, VA

Where is the SET FN command documented?

It's in the March 1986 Command System Reference Guide on pages 39 and 40. The OLOS number is 3501.01Q-2.



NADINE ROSENBAUM NEW YORK

*Who goofed on the telephone numbers? The field phone book lists the 405 Lexington Avenue number as 212-210-9726, and that's MY phone. Please have Dial Comm callers dial 8*227-5700 or 212-210-9700.*

Sorry about that, Nadine. We'll pass the word and try to get it corrected in the next phone book.

LYDA GRASER TAMPA

Do you know when GE employees will be able to buy RCA products at the employee discount?

GE has no current plans to initiate such a program. While RCA employees have been given access to the GE product purchase plan as a gesture welcoming them into the GE family, there are no current plans to do the reverse. Thanks to Wiley Harris, Manager, Human Resources Programs, for this answer.

MARILYN BRADY CULICAN ROCKVILLE

A client wants to know at what time of the day the PSUs are counted. He feels that if he stores 30,000 PSUs on the system for only two or three hours at the right

time of the day, they won't be counted. Can you help?

Even if he stores the 30,000 PSUs for only 30 minutes, that total is recorded on something called the "high water mark for the day," and it is used in the calculation of charges for that day. You may want to refer to the DY28 file named .STOR that provides formulas and other material about the way storage is calculated. Feel free to give a copy of it to the client, if it will help him understand storage charges.

JOHN HENNESSEY MILWAUKEE

I'm writing a proposal, and I need something in writing for Client Services. Do you have anything on line?

Yes, there's a QK11 file named CSOBP*. You can rename it and save it into your QK11 U#, then edit it to your liking. You can personalize it for your client by doing a CHAnge command: CHA 100/CLIENT NAME/A. B. JONES/.

JOAN BURTON ARLINGTON, VA

How can we find out who is handling new accounts in distributor countries?

There's a DY28 file named IMPOR*T. The distributors

refer to new business coming into their country as import business. There is a person in each distributor country who is designated as the Import Manager. The name and QK address is listed in this file.

DELIVERY SYSTEMS

BETH TUCKER ROCKVILLE

*What does the *ALLCAT designation on a catalog imply?*

It means that any user number in the catalog can receive high-speed service output using most Logical Terminal Identifiers (LTID) that are set up for the catalog. A mailbox request must be entered to obtain *ALLCAT. The status entry for *ALLCAT is HA under ADM, which an administrator can determine by displaying a user number. The administrator can determine the existence of *ALLCAT by displaying the validations for the catalog.

There are three categories of LTIDs: (1) an LTID with a type designator of NU that is simultaneously shareable by all user numbers in the catalog; (2) an LTID with no type designator assigned that can be used by a high-speed terminal connected to any user number in the catalog, but not simultaneously; and (3) an LTID with a type designator of US that cannot be used with *ALLCAT.

M. Y. YEOW SINGAPORE

What is the availability of Dow Jones Financial data base on MARK III Service?

The banner message that first appeared on 7-14-86 indicated that the Dow Jones offering was just for

US users. There is an effort underway to make it available through our distributors, but it has not been finalized as yet. I'm sure you'll hear about it via another banner message when it becomes available through distributors.

**PAUL MISIR
SINGAPORE**

Can you provide some information about Disaster Recovery Service?

Yes. This was a service that was being offered by GE Information Services, but it is no longer in the product basket; it's being handled from Schenectady.

If a client using IBM, Honeywell, or DEC equipment wants to provide a backup service for his BATCH data processing, GE can offer the use of a computer center in the Schenectady, New York, area. If there's a fire or a computer failure, but the company needs to continue processing, the user can fly to the computer center with a copy of the operating system, programs, and data tapes and can use the data center equipment on a scheduled basis.

The service was not at all related to MARK III service or MARK 3000 Service. It's obviously not something in which a distributor client using MARK III Service would be interested. Your client or prospect might have read something about it in one of the previous press releases.

**HOWARD FORER
NEW JERSEY**

Is there an estimate of how many bytes per hour are transmitted when a device is emulating a 2780 or 3780 at 4800 baud?

Yes. For 2780 emulation at 4800 bps, you will transmit about 700,000 bytes per hour. For 3780



emulation at 4800 bps, you will transmit about 1,000,000 bytes per hour.

**MARK 3000 SERVICE
EQUIPMENT UPGRADE**

Since we introduced MARK 3000 Service, GE Information Services has always kept up to date with the latest IBM equipment releases. We started with the 370/158, then moved to the 3033, then the 3081, and now we have moved up to the 3090/200. The hardware swapout will be invisible to our client base, and we feel that service quality will improve.

**LEE KERBEL
TAMPA**

What's the status on the BusinessTalk product for the IBM PC?

It's currently in beta test and I hope will be commercial in October. There was a recent pilot training program held at the ITC in Rockville. The two-day course went over the details of BusinessTalk as accessed from the PC. The class participants provided feedback on the course, so it has had some QA work done on it before being rolled out to the field.

**RICK VAN ATTA
GREENSBORO**

Is there a list of error codes on line for FIV and F77?

Better than that, there's a program that will scan the lists and tell you what is meant by the error code. When you enter /UTL*** IER 128 (to find out what F77 error you ran into), the system comes back with 128=attempt to open too many files (nested CALL SYSTEM). If you have an error code from an FIV code program, you can enter UTL*** IOC 111, and the system will respond with 111=string exceeds maximum size. Just remember, IOC for FIV and IER for F77.

**MICHAEL ELENBY
AUSTRALIA**

What information can you provide about WORLD-MARK?

It's offered on MARK III Service by the International Trademark Management System, run by Intellectual Property Network Limited in Chicago. It's used for information about trademark owners worldwide. The software is not in a Q catalog but is handled on a reseller basis. You can send a QK to TWELLS to get additional information.

**VERN SMITH
DETROIT**

Can a user use the DMT mode when he's running XMODEM protocol?

Yes. The SET P command initiates an XMODEM session. Here's the complete syntax for specifying DMT and the file name to which you want to read it: SET P1(a,b,EOF,c,'DMT MYFILE',YYY).

See pages 33 and 34 of the Supplement to the Command System Manual OLOS 3501.01Q-2 for further details.

**MIKE COWIE
AUSTRALIA**

Is there any way for a running program to determine the speed at which the terminal is running?

Yes. Here's the coding. It's not documented, so there's no guarantee that it will stay forever.

```
10 K=LNSPD(0)
20 L=LNTYPE(0)
30 PRINT,K,L
40 STOP
```

The output will be: 3 2
Program stop at 40.

The first number produced represents the speed, using the following information: 0=110 baud; 1=134.5; 2=150; 3=300; 5=1200; 6=2400; and 7=4800-9600.

The second number produced is the TYPE number now set for that terminal.

**LOYAL HUDDLESTON
PHOENIX**

Using the command SYS FIV will call in that compiler, but how do I call in the C Compiler?

You don't type in SYS C or SYS CEE. A C program can't be run from source code; the source code must be compiled and loaded before running it. For full details, list TOOL:C.MEMO. The C Language Compiler is supported in Client Services by Barbara Phillips (8*274-6510).

NETWORK ACCESS

**RUSS CARR
CHICAGO**

Can you give me an update on the status of access in the Far East?

Yes. First, remember that there are two Chinas—the Peoples Republic of China (the mainland) and Taiwan. Although there is a PDN in Beijing in the PRC, the ports are all being used by the government, and commercial users are not allowed. The only way into MARK III Service from the PRC is through Telex into the Hong Kong port or long distance to one of the neighboring countries.

Taiwan has access to MARK III Service and the QUIK-COMM System through the PDN called PACNET. Our distributor there is reachable through the QK address VANGUARD. In the Philippines, MARK III Service, including the QUIK-COMM System, is available via local access in Makati (metro Manila). For reliable line quality, 300 baud is recommended. Thanks to Szewai Leung in Hong Kong for this data.

There also are some data about the distributor in Korea on DY28. List a file named DMIKO*RE. Their QK address is DMIL.

**SHARON BLACK
CALGARY**

Do we have local or PDN access in Tanzania or Ghana in Africa?

Details about access in ALL of Africa is provided by our Johannesburg office in a DY28 file named AFRICA. List it for details.



**JIM BILLGER
HOUSTON**

Do you have any details on the Public Data Network that serves Canada?

Yes. It's called DATA-PAC, and it covers scores of cities that are not served by direct access to GEIS Services. The local phone numbers for the various cities are listed in a QK11 file named DPAC**. In Canada, there is no need to sign an agreement with the PDN—you access through the listed phone numbers, and Canadian GE picks up the PDN charges.

**JOHN HENNESSEY
MILWAUKEE**

The price for EDI service indicates there is a discount of 25 percent for use after hours. Does it include the premium charge for use of the 800 phone numbers? Will the premium be discounted?

Yes.

**FRED LaPLANTE
SEATTLE**

When a user is connected at 2400 asynchronous service (conversational), will the use of the DEM command reduce the charges like it does at 300 and 1200 baud?

No, 2400 asynchronous service does offer this feature.

**SAUL SUMMERALL
ROCKVILLE**

If a distributor account representative is in a client's office and has only a Telex terminal, can he use it to request Rockville Client Services support?

Yes. From the Telex machine, he can dial 192803022, and the request for assistance will go to QK11 catalog address HELP. It will show up quickly on the Client Services terminal, because it's in the MONitor mode.

**J. P. RUBIO
MEXICO CITY**

Can you provide any help for a client who wants to connect with his IBM System 38?

Yes. There's a DY28 file named IBMS38P that indicates how you can get the S38 connected. Fast Fax also has a write-up that helps that we received from a user. With this document, the S38 system console operator can configure the system with certain parameters, load in the RPG program (source code is included), and, although it is not an actual 3780 emulator, it seems to do the same job and get the S38s connected.

QUIK-COMM SYSTEM

**DEBBIE SCOTT
HARTFORD**

What is the "personalized" Telex address, and how do I get one?

The personalized Telex address is the 6-digit number for the catalog you are in plus 3 digits that can be translated into your specific address.

Let me use the example of the QK11 catalog and an existing personalized address. The Telex address for the QK11 catalog is 192803. If a user sends a Telex message to that number and puts QC:HELP on the first line of the Telex, TRT will get the message and direct it to the Client Services desk—HELP. That's not the personalized address. The personalized address for HELP is 192803022.

For a QUIK-COMM System user to get the additional three numbers for his or her catalog, the sales representative must send in a Mailbox request that a personalized address be generated for the catalog. A mailout message from Mailbox back to the sales office will indicate the three additional numbers.

The advantage is that users at Telex machines do not have to remember the QC:HELP technique but can merely send the message to the 9-digit address. The charge for each 3-digit personalized address is \$20 (a one-time charge).

**BOB FOSTER
MIAMI**

From what countries can QUIK-COMM System users send messages to Telex devices?

The list is growing, so it keeps changing. The file is on QK11 under the name TELEXACC.

**AL ABRAMS
NEW YORK**

My client is using PCMBX, but his monthly invoice shows 600 ABUs for a Project ID called GEQUIK-COMMAILBOX. What is it?

It's the way the system charges him for the six addresses he has: 100 ABUs per address per month.

**PHYLLIS VERMA
ARLINGTON, VA**

How can we tell what the cost of the PC Mailbox program is in other countries?

There's a file on QK11 called PCMXCOST that will tell you. It's a very helpful matrix that has country names down the list, with the following column headings: cost, training cost, PDN or local access, auto/manual modem, contact, and comments. The data were compiled by Rand Walker—thanks, Rand!

**ASGEIR ELIASSEN
NORWAY**

Is it possible to recover data concerning ABU usage several months back in time?

No. The system keeps current-month and previous-month data, but when data become two months old, they are purged on the monthly sweep. The Month End Usage (MEU) report made available to users is free the first time he or she runs it, so the user should create a schedule of some kind to get it while it's free. ▲

GENIE INDIANA JONES AD

Remember that you have until October 31 to sign up for a commercial GENIE account without having to pay the one-time sign-up fee. Also remember that you will, of course, have to pay the standard commercial rate of \$5 per hour for non-peak hours using any of GENIE's many games, roundtables, travel services, communication and news features, and other products. Details on how to sign up are in last month's SPECTRUM. ▲

MILESTONES

Congratulations to the following employees, who celebrated service anniversaries in August and September.

35 years
Rockville
Peggy A. Patrick

30 years
Brook Park
Zigmund Quastler

Rockville
Russell I. Evans
Willard A. Gilly

25 years
Rockville
Jack A. Hanson

20 years
Rockville
Calvin J. Cillay
Steven C. Jenkins
Jerry Way

15 years
Atlanta
Robert E. Creasy
Rockville
Anthony P. Dwyer
Saddle Brook
David L. Rascoe

10 years
Rockville
Kevin R. Boyne
Charles I. Dickman
Dianne B. Dixon
Dana F. Fidler
James W. Hines
Judith A. King
Janet L. Manili
Nancy G. Niedrach
Vaughn D. Rockney
Alexander Sledge, Jr.
David H. Su
Michael D. Watts
San Francisco
Michael E. McDowell

5 years
Atlanta
Neil Gilmartin
Melton C. Presley
Patricia J. Raines
Brentwood
Gregory T. Williams
Los Angeles
Karen E. Anderson
Morristown
Nicholas J. DuBois
New York
Steven B. Barr
Rockville
Robert A. Carpenter
Frederick J. Hitt
Geri F. Hylla
Betty A. Mandel
Sherry L. Mills
Thi T. Nguyen
Janice M. Orcutt
Thomas E. Snyder
San Francisco
Gail M. Graziano
Diana Jones ▲

S&SP DISTRIBUTION CHANGE FORMS DUE NOVEMBER 1

Some 119,000 GE employees who participated in the Savings & Security Program (S&SP) in 1983 have received holding-period distribution notices for S&SP investments scheduled to be distributed in January, when the three-year holding period ends. The notices were sent to employees' home addresses in the first week of September.

The distribution notice was redesigned this year to reflect the new cash-payout option available for the January 1987 distribution. For the first time, participants can elect to receive a cash payout of their holding-period savings instead of securities.

Part 1 of the distribution notice contains important information that S&SP participants should carefully review. Shown are:

- o Credits you are eligible to receive in the January distribution, including matched savings contributions of up to 7 percent of pay and additional unmatched savings of up to 10 percent of pay.
- o Distribution alternatives, including the estimated distribution value of securities or cash to be received.
- o Projections of taxable income, if any.
- o Registration and mailing address information on file.
- o The current federal-tax withholding election.

November 1 Deadline

Participants should use Part 2 of the form to make any changes in the distribution election, registration, mailing address, and federal-tax withholding election. Change forms must be signed and mailed to reach payroll by November 1. Employees should mail completed forms to A. C. Kryszczak, Manager, Payroll Disbursements, General Electric Company, 1 River Road, Building 4, Room 409, Schenectady, New York 12345.

S&SP participants should pay attention to the information on both sides of the distribution notice form. By checking the form now and sending in any changes before November 1, participants can avoid the delays of having their distribution sent to the wrong address or the aggravation of changing registrations after the securities are received.

Because the cash payout is a new option, individuals who want to receive their distribution in cash will have to fill out and turn in the change form. The only way to choose this option is to fill out the change form and file it with the personnel accounting office.

Tax-Law Changes

"The new tax law will change 1987 tax rate tables," says Tom Burns, Manager of GE Corporate Employee Benefits in Fairfield, Connecticut. "And, beginning next year, there will be an additional income tax of 10 percent on taxable income from most distributions and withdrawals received by plan participants who are active employees or are on layoff with protected service.

"While 1987's tax rates will be lower for many people, most recipients with taxable

income from the S&SP distribution will have to pay the extra 10 percent. This extra tax will be in addition to regular taxes owed on any taxable income received in the January distribution."

Taxes owed on January's distribution will be paid when calendar year 1987 tax returns are filed in early 1988. The extra tax does not apply to those receiving retirement distributions or to participants over age 59 1/2.

Taxable Income Estimate on Notice Form

The S&SP distribution notice form provides an estimate of taxable income under each of the distribution alternatives. To illustrate the effect of the tax law changes, Burns cites the example of an S&SP participant receiving a January 1987 distribution worth \$3,000.

If the individual's unrecovered investment—the amount eligible for tax-free recovery—is \$1,000, the taxable income from the distribution would be \$2,000. On \$2,000 of taxable income, a participant in a 15 percent tax bracket would pay regular taxes of \$300 ($\$2,000 \times .15$), plus a 10 percent additional income tax of \$200 ($\$2,000 \times .10$). The result: a total tax of \$500 on the distribution.

Minimization of 1988 Tax

One way to avoid taxes in 1988 on the January 1987 distribution is to take advantage of S&SP's Retirement Option Account (ROA). Three of the distribution alternatives allow participants to place part or all of the distribution in the ROA. In recent years, about 23 percent of those eligible for distributions used the ROA.

Many cite tax deferral as the reason for choosing to defer distributions through use of the ROA.

Securities retained in the ROA continue to grow tax-free until a participant retires or leaves GE. Regular ROA securities (excluding Deferred Pay) can be withdrawn for the purchase of a primary residence, college tuition bills, or serious personal financial emergencies. Deferred Pay Account securities can be withdrawn only for serious personal financial emergencies and only after all regular S&SP and ROA amounts have been withdrawn. ▲

PHILLIPPE AWARD NOMINATIONS ARE NOW OPEN

If you know someone who volunteers time to help others—children, adults, the community—now is the time to help recognize that person's outstanding public service by nominating him or her for the General Electric 1986 Phillippe Awards. Nominations will be accepted from October 1 through December 1; you can nominate yourself or a colleague, and re-nominations are strongly encouraged.

Since 1970, when the awards were inaugurated in honor of the late Gerald L. Phillippe (a GE Board Chairman active in public service), approximately 130 employees have received this award honoring leadership in volunteer community service. The award includes a Phillippe plaque and a \$1,000 donation on behalf of the honoree to the organization of his or her choice.

Up to 29 Phillippe Awards will be presented this year, and three of those recipients will receive Corporate

S&SP

The accompanying table summarizes the prices for GE stock, Mutual Fund, and Holding Period Interest Fund that are used in the Savings and Security Program to credit participants' accounts. The Long Term Interest Fund price for the last day of the month also is shown, as well as year-to-date annual income rates for the HP and LT Funds. ▲

Month	Stock Price	Mutual Fund Price	Price	YTD Annual Income Rate (a)				Price	YTD Annual Reinvestment Income Rate
				1983	1984	1985	1986		
January	\$69.818	\$35.929	\$10.00	13.7%	13.2%	12.8%	9.6%	\$11.57	10.1%
February	\$75.013	\$38.019	\$10.00	13.7%	13.2%	12.8%	9.7%	\$11.96	10.4%
March	\$77.403	\$40.995	\$10.00	13.7%	13.2%	12.9%	10.5%	\$12.53	10.2%
April	\$77.744	\$41.184	\$10.00	13.7%	13.2%	12.9%	10.6%	\$12.23	10.2%
May	\$80.923	\$42.452	\$10.00	13.7%	13.2%	12.9%	10.6%	\$12.36	10.1%
June	\$75.915	\$41.625	\$10.00	13.7%	13.2%	12.9%	10.6%	\$12.34	10.0%
July	\$75.583	\$42.362	\$10.00	13.7%	13.2%	12.9%	10.7%	\$12.60	10.0%

(a) The "announced" HP Fund Rate was 13.25% for 1983, 12.75% for 1984, 12.50% for 1985, and 9.50% for 1986.



Award recognition (which includes special ceremonies at Corporate headquarters and an additional \$1,000 grant to the organization chosen by the recipient).

Based on employee population size, one Phillippe Award has been allocated to GE Information Services, Software International, and GECON collectively. GE Information Services' program coordinator, Paula Wiltout, will work with Employee Relations Managers to process nominations and then will relay them to a selection committee that will choose the recipient.

Contact the GE Information Services program coordinator for nomination forms (8*273-4187; QUIK-COMM: WILTROUT). Submit completed nominations to your designated Employee Relations Manager no later than December 1, 1986. Phillippe nominees and the recipient will be announced in early December. ▲

NEW AND REVISED DOCUMENTATION

The following new and revised publications are available from the On Line Ordering System (OLOS), which also will provide price information. Forms and promotional pieces are free; most technical documents do carry prices (some rather high).

0301.43

Leader Magazine
Client Services Operation Edition
Second Quarter 1986

2051.77

RACF Security Administrator's Guide

2051.79

RACF User's Guide

2051.80

RACF Messages and Codes

2051.81

RACF Command Language Reference

2055.46

IMS/BTS General Information Manual

2055.47

IMS/BTS Program Reference and Operators Manual

2055.48

IMS/DBT General Information Manual

2055.50

IMS/VS Product Profile

3918.27A (Revision)

Network Monitoring Facility Product Profile

4000.02A (Revision)

GE Information Services Education Catalog 1986-1987

5070.073

Ending the Paper Chase—The EDI*EXPRESS System

5070.076

Making Information Your Competitive Edge—EDI for the Paper/Printing/Publishing Industry

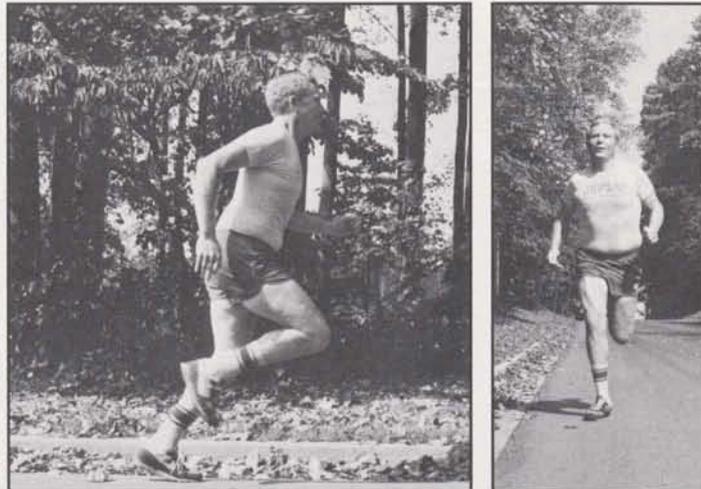
5070.078

Forging the Value Chain—EDI for the Retail Industry ▲

RUNNING UP THE SCORE FOR MDA

This year, Carl Erickson (Program Manager, MARK 3000) raised \$1,370.40 for MDA by running 120 miles during the month of May. Erickson presented the GE Information Services contribution—which totaled almost \$10,000 in pledges and corporate per-mile contributions for the 226 participants—to MDA representatives in Washington, D.C., during the annual MDA Telethon over Labor Day weekend.

In addition to GE Information Services support, Erickson had 50 sponsors within the company and 30-40 sponsors outside the company who contributed to Erickson's total fundraising on a per-mile basis. Running at least five times a week, alone more often than not, Erickson increased his mileage each time he ran to reach his 120-mile total.



Last year Erickson raised over \$1,000, running 80 miles. Surprisingly, "until last year, I never ran at all," Erickson reports. "It was a real challenge, just to start running. I challenged my co-workers to 'make me run' by sponsoring me with a pledge. I not only received generous financial support—I was pleasantly surprised to receive a great deal of encouragement. Both last year and this year, I really drew a lot of strength from my sponsors and colleagues here at GE Information Services. Their interest and support spurred me to run and to run well."

Erickson also drew strength from his personal knowledge of what MDA does and where the money goes. "My daughter has a neuromuscular disease, and I've seen MDA in action. Whenever I'm running and I'm getting tired, I always think of how hard kids with MDA and similar diseases work just to maintain their flexibility and mobility and to do the everyday things the rest of us take for granted. They never seem to get discouraged, and I believe that the hope and support that MDA provides is responsible, to a large degree. Their model makes it easy not to give up." ▲