

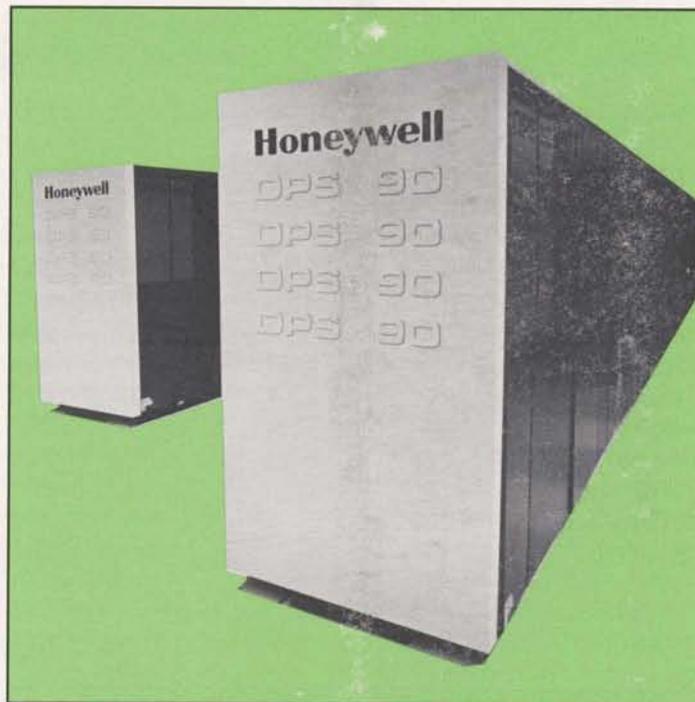
JULY 1986

# SPECTRUM

FOR THE EMPLOYEES OF GE INFORMATION SERVICES COMPANY

*cover story*

## MARK III<sup>®</sup> REVITALIZED: FOCUS ON CLIENTS & TECHNOLOGY



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INFORMATION  
SERVICES

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

cover story

## MARK III<sup>®</sup> REVITALIZED: FOCUS ON CLIENTS & TECHNOLOGY

### MESSAGE FROM BOB HENCH

Over the past year, the MARK III product area has undergone significant change, enhancing technological capabilities and improving responsiveness to clients.

Virtually all the equipment in both Amsterdam and Brook Park has been replaced or upgraded--a remarkable achievement. Each component--Engineering, Deployment Planning, and Operations--has made major contributions and worked together to execute the largest product and system change in our history.

Concurrently, we have increased the reliability and quality of MARK III Service to new levels of stability. We created a new group, Client Systems, to provide direct support for key MARK III clients and opportunities, and already the field Sales organization is giving Client Systems very positive recognition for its participation in client applications.

The following article reflects much of the past year's work. I am very proud of our MARK III team's record, and I think you will be, too.

*Bob*

### MARK III OVERVIEW

If you visit the third floor of Maryland Center in Rockville, you may do a double take at the building's only Roman numeral floor sign--III. It's just an indicator of the pride and good humor that the MARK III team brings to the business these days.

Moreover, the team does have a lot to brag about lately. MARK III Service technology and performance have been upgraded at the Supercenters by the addition of eleven Honeywell DPS 90 processors in four clusters and 130 IBM 3380 disk storage devices. Many technical capabilities are in development or have been added to the MARK III Service, and the Client Systems group has raised the level of technical support by implementing a three-pronged agenda to intensify and focus client support.

Apparently these new measures are largely effective. The MARK III 1986 revenue is almost on track, albeit lower than last year's revenues because of factors such as the expected erosion of small clients (as they turn to PCs and the like) and the price erosion necessary to retain clients--particularly large clients--who know that computer services' costs are declining and consequently think they should be getting the same or expanded services for lower rates (the price-performance trade-off issue).

Roger Dyer, Manager of MARK III Client Systems, reports, "Finding the right kind of MARK III business is increasingly challenging, because our new business is different from our old business. Traditional MARK III clients started small and grew with us. Their needs tended to be incremental--more users, bigger programs, more features, faster response.

"Now I see a different set of opportunities. Current client requirements are communication-intensive, linking existing systems and providing intelligent device support, 'switch' applications, local area network (LAN) interfaces, dial-out capabilities, and



Equipment upgrades at the Brook Park Supercenter took place without disrupting operations.

voice transmission. Essentially, we're now offering network processing rather than host processing."

The rejuvenation of MARK III rests heavily on technical upgrades, enhanced capabilities, and technical client support. Each of these improvements is described briefly below.

### EQUIPMENT UPGRADES

Since March 1985, the MARK III team has undertaken equipment upgrades that are replacing or moving every piece of equipment in the Brook Park and Amstelveen Supercenters. The two primary equipment upgrades are the replacement of 34 Honeywell DPS 8/70 mainframes with 11 Honeywell DPS 90s (essentially the NEC S 1000, licensed to Honeywell) and the introduction of 130 Honeywell MSU 3380 disk storage devices to replace existing STC 8650s.

Notably, as Bob Hench observes, "To date, at no time has a client gone off the air because of our equipment upgrade operations." Perhaps most remarkably, Mel Szot (Manager, MARK III Planning and Quality Assurance) and Zigi Quastler (Manager, Ohio Center) agree that such equipment upgrades constitute "business as usual."

"We undertake such upgrades all the time," Quastler explains, "And we execute them basically during working hours, although the actual changeovers must take place on weekends to minimize the chance of affecting clients."

"It's just a matter of careful planning," Szot adds. "Although the logistics of the DPS 90 and 3380 replacements required an extraordinary effort, we had no particular problems."

"Such technical improvements are standard operating procedure for us. In the computer services world, we're constantly challenged by technical advances, and we have to keep pace. It's a cycle, and there's rarely a time when we're not contemplating replacing equipment or in the midst of an equipment upgrade."

#### DPS 90 Upgrade

The DPS 90 mainframe upgrade took roughly two years from its selection in 1984 (after an extensive one-year benchmark test) to final installation. The last MARK III file systems were successfully migrated to the new processors in February of this year. Each DPS 90 currently runs at 7 million instructions per second (Mips) during normal operation.

"The core issue in such an equipment upgrade is keeping clients up and running while we're changing over," Szot says. The extensive planning necessary to accomplish that objective included:

- o Planning and Deployment's detailed evaluation of MARK III capacity requirements to size the current load and project future growth, which resulted in nine DPS 90s at Brook Park and two at Amstelveen.

- o Facility's consideration of numerous details, such as cluster locations, provision of special air conditioning capacity (including necessary duct work), and electrical connections.

- o The development of several operating system modifications to accommodate the new DPS 90 environment, which required input from Operating System Design, Integration Test, and Software Deployment personnel. Moreover, all the test and diagnostic routines for scratch pad memories, random access memories, front-end communication controllers, and bus adapters had to be rewritten.

- o The development of a detailed deployment plan and schedule that would not affect the client base but would accommodate the DPS 90 installations, the deployment of a heavily modified operating system, and the deinstallation of the idled DPS 8/70s.

- o Overall evaluations of the impact of the change-over on the network and appropriate network reconfigurations.

The actual deployment of DPS 90s began in May 1985 and required detailed logistics planning and extensive testing and physical preparation during the week to accommodate the heavy workload executed on weekends. As Szot recalls, "Our people really had to know exactly what they were going to do on any given weekend."

During the summer of 1985, the file systems were slowly (and with painstaking thoroughness) migrated to DPS 90s, the results were monitored and clusters were formed (an extremely detailed process that produced its first cluster in August). In the fall, the upgrade process was accelerated based on earlier installation successes, and twice the number of DPS 90s were installed and uploaded in half the time.

The DPS 90 change-over was completed in Brook Park in December 1985 (30 days ahead of schedule), and the European schedule was accelerated based on Brook Park's success. Amstelveen's first and second uploads took place in February 1986, about a month ahead of schedule on average.

Thus, the entire MARK III client base was migrated to DPS 90s in less than ten months, on cost and ahead of schedule. In Szot's assessment, "We did exceptionally well after one brief period of adjustment early in the process. We had some software problems--quickly corrected--but that's to be expected when you scale software up for large computers like we did.

The DPS 90s offer several advantages over their predecessors. For example, the DPS 90s can:

- o Handle large programs more efficiently. Thus, within any given cluster, any client can have more users, and the cluster can accommodate clients with larger demands.

- o Produce the efficiencies and economies of scale necessary to remain competitive. Production costs decline with each hardware upgrade.

- o Offer exceptional reliability and back-up capabilities, as each new generation of technology often does. Of note: the DPS 90s survived an impressive trial during early commercial deployment, when one of two DPS 90s in a cluster went down, and the other DPS 90 picked up the load, carrying 600+ users (versus an expected normal capacity of 415 users per DPS 90).

The upgrade required the close coordination of over 20 GE Information Services functional organizations, two Supercenters, and three hardware vendors. To say that almost all MARK III personnel contributed is hardly an overstatement. The people who helped make the DPS 90 upgrade successful include--but are in no way limited to--Bob Stolzenburg (Manager, MARK III Operating System)



Mel Szot (left) and Zigi Quastler were two of the leaders in the DPS 90 changeover.

and his operating system team, Carmen Edgehouse (Consulting Specialist, Ohio Center Planning), Wayne Rice (Manager, Ohio Center Facilities), Helmut Van Der Sanden (Manager, Supercenter Operations, Amstelveen) and the Supercenters operations staffs.

### 3380 Upgrade

The 3380 equipment upgrade is now in progress. The program began in March, and the Amstelveen changeover to the 3380 disk storage units was completed in May. The Brook Park swap should be finished by the end of July.

Like the DPS 90 upgrade, the 3380s are being commercialized on weekends, and the operation is largely invisible to clients. As Szot explains, "Occasionally we've had to ask a client to extend the weekend down-window. Otherwise, our clients are unaffected by the 3380 upgrade process."

GE Information Services decided to install the state-of-the-art 3380s in 1985, based in part on the normal progression to next-generation hardware. However, reliability problems with the STC 8650s substantially accelerated the process; over time they had not performed up to standards and, in fact, had exhibited unacceptable failure modes.

The planning process underlying the 3380 changeover, which began in January 1985, exhibited the same detail required for the DPS 90 operation. The Engineering team evaluated test 3380s, developed necessary hardware and operating system modifications, and designed the 3380 operational

configurations that would best suit the needs of the Supercenters.

The implementation planning--how do you accomplish the swap without affecting client service--precisely laid out the transfer of logical systems to the new disk storage devices, including details such as:

- o The timing and sequence of transferring client files, based on client size and requirements. The plan moved the highest risk file systems first.
- o The physical logistics of 3380 configurations, air conditioning support, and the like.
- o The actual implementation at Brook Park and Amstelveen, including bringing the 3380s on line, relocating other equipment as necessary, and cycling out the 8650s.

In March of this year, the first 3380s were installed, accompanied by a rather elaborate, countdown-like test and acceptance phase-in that linked the 3380s to every physical box in the Supercenters prior to turning them over as commercial. This procedure was repeated 16 times as each group of eight 3380s was delivered.

The performance to date of the 3380s has been outstanding. Szot reports, "We have not had a failure that affected client service. The only 3380 downtime has been for normal maintenance." The overall impact on MARK III availability has been the single most important result of the upgrade.

The 3380s offer greater reliability, provide a significant improvement in storage per unit (a three to one improvement per box), and will accommodate

Photo by Paul Tepley



Honeywell MSU 3380 disk storage devices have replaced existing STC 8650s.

running on a faster channel (which is planned for next year and will improve system efficiency).

Like the DPS 90 operation, the 3380 swap required the participation of almost all the Supercenter personnel. The following people deserve recognition on behalf of all those who made the changeover so smooth and successful: Tom Popdan, Subrahmanyam Raman, and Chuck Regner from the Planning area; Carmen Edgehouse and Wayne Rice in the Ohio Center; and Helmut Van Der Sanden and his team in Amsterdam.

On the face of it, you'd think that the DPS 90 and 3380 changeovers would have exhausted the Supercenter personnel, but that's just a way of life for them. Next year, they're planning the permanent storage channel upgrade--which thankfully won't involve nearly as much physical relocation, but they will have to reconfigure the input/output processors--and after that they'll go on to some other upgrade...and soon it will be time to swap out the DPS 90s and 3380s. And so it goes.

## CLIENT SUPPORT

Just over a year ago, President Walt Williams described GE Information Services Company's new strategic direction and reaffirmed that "in the near term, we expect that MARK III will continue as the mainstay of our business." At that time, Technology Operations was reorganized, MARK III Service became a department, and Bob Hench became the MARK III Vice President and General Manager.

Hench decided to "try something different" and created MARK III Client Systems to directly support the existing MARK III revenue base, particularly the large clients who dominate the Network Services business. One year later, Client Systems is so successful that both MARK 3000™ and Communications have organized groups with similar missions.

Looking back on a sometimes frenetic first year, Roger Dyer observes, "We started out to do something quite different for this company--to respond to clients' needs without a great deal of before-the-response review and discussion among ourselves. Where a requirement was not clear cut, our engineers talked to the client, explaining what could be done and what could not, discussing what the client really needed, and finding the middle ground on the assumption that there are no--or at least very few--absolute requirements.



Photo by Jean Sunderland

The Client Systems support team pictured above includes (left to right), Norm Harvey, Tom Eastwood, Roger Dyer, Sue Bynum, Susan Curtis, and Pete Lovell. Not pictured is Smith Keene.

"This is a very flexible approach, and clients began to see us as extremely responsive. They appreciate consulting with the developers--the people who actually make things happen--and the developers are doing an outstanding job of responding to clients."

Client Systems--fondly known as the "Skunk Works"--is pursuing a three-part agenda that includes:

- o Direct support of the top 20 MARK III clients, managed by Client Systems.
- o An Awareness Program aimed within the MARK III department, run by volunteer John Jamieson, Manager of MARK III Testing.
- o A Field Program--managed by Client Systems--designed to reassure clients and MARK III field personnel of the ongoing company support for MARK III Service.

The MARK III department enthusiastically embraced the Awareness Program, with engineers producing client profiles so that everyone would be familiar with major clients, their MARK III work, and their "hot buttons."

At the same time, Client Systems personnel went on the road. Bob Hench and Roger Dyer brought field office sales staff up to speed on MARK III's technology, focus, and--most importantly--departmental support for sales and clients. Client Systems personnel also visited key clients to explain the company's strategic shift and to emphasize GE Information Services' commitment to MARK III clients and their businesses and to ongoing improvement in focused technical support and available technology.

"The client visits are a high-payoff activity," Dyer explains. "Talking to clients and understanding what they do and want to do with our systems are critical to providing services that will hold our client base. For example, in the case of the problems that we had with disk drives, Bob Hench sitting down with his opposite number to explain what we were doing could take the heat out of the situation."

The client visits opened the communication channels, and sales staff began calling to request support, ask for technical advice, inquire about feasibility of specific projects, and schedule sales call support. In addition, client visits often precipitate special requests--for Fortran 77 features, tighter log-on security, upgraded Televideo support, and the like.

"Right now MARK III has about 18 client projects under development, running the gamut from availability to new features to growth accommodation," Dyer notes. "Some require only a few weeks, but others (such as the 256K program) represent major development efforts."

"Additionally, my staff has produced a number of application-level specials for both clients and SDC staff--special subroutines or sample programs that employ new capabilities."

Looking to the future, Dyer concludes, "I see Client Systems continuing to work closely with Sales and with the client base. As our workload increased, we added resources and one person in Europe (Harold Fuchs). We have our key clients covered, and the organization now will focus on building up our ability to support both new and old business."

"But we'll also focus on continuing to have fun. It's been great to start a new function, especially one as broad as this one. We've all faced a lot of interesting technical and human challenges, and working with clients such as ours helps us keep our feet firmly on the ground while we simultaneously test new ideas, new ways of solving their problems."

"The high points clearly come when a project really pays off--when the client puts our design or feature into production or, even better, when we can generate new revenue above and beyond the expected level."

## SYSTEM CAPABILITIES

MARK III engineering and technical personnel are developing and deploying new MARK III capabilities that fit the new company strategy of marketing

telecommunications products to entire industries. Recent new MARK III capabilities fall under three complementary categories:

- o Those that facilitate the development of solutions to clients' networking and telecommunications needs.
- o Those that respond to major clients' requirements.
- o Those that increase productivity with the objective of maintaining profit margins despite price erosion.

New capabilities scheduled for development and deployment in 1986 and 1987 are briefly summarized by category below.

### Networking and Telecommunications Applications

Capabilities that support systems and applications for telecommunications or networking often require inter-program communications to link different computers, sometimes connecting MARK III application programs to client hosts and microprocessors (such as PCs).

To satisfy such client connectivity requirements, MARK III must be able to "talk" to client hosts and PCs by using the protocols employed by such computers. The MARK III team approached the task by designing capabilities that enable: (1) MARK III applications to emulate bisynchronous and/or asynchronous terminals when communicating to non-MARK III hosts, and (2) MARK III applications to change terminal characteristics when communicating with terminal emulators running in non-MARK III computers.

These development projects include:

- o Ongoing deployment of 2780 and 3780 bisynchronous emulator capabilities (EDI\*EXPRESS™ will be a major user of the 2780 emulator). This and other terminal emulation support is being done by MARK III Communications under John Watson. Jim Skinner's work in adapting the 2780/3780 emulator to a number of unique EDI protocols deserves special mention.
- o Asynchronous terminal emulation that enables MARK III applications to, for example, establish a session with MARK 3000 timesharing (GENIE™ will use a variation of this capability to access the American Airlines reservation system and the Dow

Jones services). Scheduled availability: third quarter, 1986.

o The Fortran Communication Extensions project, which will support emulation and communication capabilities—including those noted above—that are now available only through C language. Scheduled availability: early 1987.

o Terminal emulation that enables MARK III applications to interface with IBM's System Network Architecture (SNA) protocol to communicate with IBM hosts, workstations, and terminals (the QUIK-COMM™ System and similar systems will interconnect electronic mail systems executing on MARK III with those executing on MARK 3000™). Scheduled availability: first quarter, 1987.

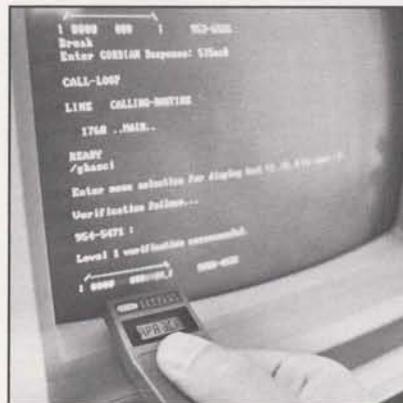
o A follow-on development project that allows MARK III to emulate a 3770 terminal communicating through MARK\*NET™ and to use the same SNA capabilities that MARK\*NET provides to actual 3770 terminals. Scheduled availability: 1987.

## Improvements for Major Clients

The MARK III team's increasing attention to major clients through the Client Systems group generates definitions of and requests for system improvements needed by such clients, either as a group or individually. These client-driven projects are tracked in biweekly schedule reviews and, in some MARK III Engineering subsections, represent upwards of 20 percent of program resources. [Of course, in the end, projects initiated by individual major clients often benefit all clients.]

Many of the client-specific projects are small, sometimes requiring but a few days to design, implement, and deploy. The significance of such projects lies in quickly identifying and satisfying the needs of major clients. Moreover, the impact of such responsiveness on clients' attitudes toward the company are as important as the work itself.

Several projects for major clients are described on the next page.



Charlie Dickman demonstrates the use of the Gordian Key Access device, which can be held in the palm of the hand, and with a numerical keypad can be adapted for screens that do not allow direct interaction.

o The 256K feature can double the amount of memory available to user programs, facilitating application modifications such as the addition of new capabilities and alterations that eliminate overlays and improve execution speed. This project is a joint implementation by MARK III User Services under Dave O'Connor and AED's Data System Technology under Don Deutsch, with an assist from MARK III Operating Systems. Scheduled availability: fourth quarter, 1986.

o The shared memory capability is designed to enable the operating system to execute multiple copies of the same application program (a phone company with hundreds of simultaneous users will employ this feature to free up processor memory and accommodate more users). Led by Lowell Von Egger, this project is a joint effort by MARK III User Services and MARK III Operating Systems. Scheduled availability: fourth quarter, 1986.

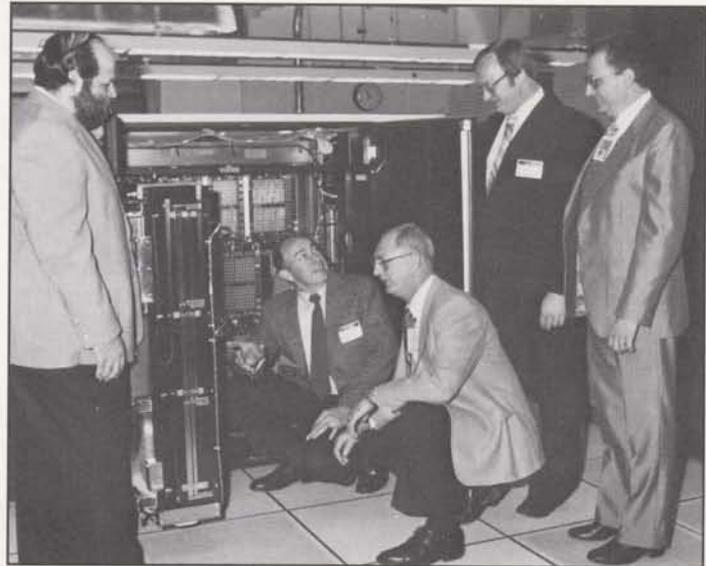
o The currently available Gordian Key Access capability, developed for a major New York bank, is designed to enable a user to create a completely secure password by applying a special device (about the size of a box of matches) to the PC screen. The device reads a pattern on the screen and generates a response that is both unique to the device and different each time the device is used. Charlie Dickman is leading this effort.

o A series of projects for a California computer company helped limit the number of concurrent users; the company essentially has a user capacity limit agreement but has downloaded PC software that requires well-structured user limit denial messages.

Other projects initiated for specific clients addressed user-specified password masking to provide application control over a password prompt (for a major New York bank) and access to the date of password change (for a telephone company).

### **Increased Productivity**

A number of programs in 1986 and 1987 are designed to complement the DPS 90s and 3380s by further reducing costs, improving quality, and increasing system and people productivity. Several productivity programs focus on the problems inherent in handling large clusters of many users by



At a ribbon-cutting ceremony, GE Information Services employees and Honeywell representatives saw the interior parts of the normally sealed DPS 90s. From left to right they are Carmen Edgehouse, John Ballou (Honeywell), Wayne Rice, Ed Cave (Honeywell), and Jim Bellomo.

employing fewer processors (the DPS 90s are deployed in clusters of three processors rather than in clusters of four to six processors like their predecessors).

Productivity projects include:

o A program completed in March of this year that moved system work areas used to execute disk input/output on behalf of the user out of scarce areas in low memory, enabling MARK III to run 600 or more users on a single processor when necessary—for example, in case of failure or maintenance of other processors in the cluster. Jerry Brown, Chuck McInnes, Greg Cook, and Russ Hauger participated in this rapid, outstanding implementation.

o A program that reduces the number of temporary storage I/Os that process user input from the network, storing data in memory to eliminate a disk write/read and doing fewer but larger I/Os to

*Continued on page 29*

## FORECAST INDICATES SLOW GROWTH IN THIRD AND FOURTH QUARTERS

Project 36, General Electric Information Services Company's 36-month financial and operating plan, is on target for the first six months of 1986 in terms of net income. However, U.S.-based revenue has not ramped to expected levels--even though the rate of orders has been good.

The forecast for the remainder of the year and into 1987 shows revenue continuing to slip below plan in Marketing & U.S. Sales Operations (M&USSO)--partially offset by strong revenue from International Sales & Services Operations (ISSO), thanks to favorable monetary exchange rates and higher sales volume.

Year-to-date net income for Network Based Services (NBS) is \$9.9 million--21 percent above Operating Plan--because of favorable exchange rates and cost deferrals, but Bob Agans, Finance Operation Vice President and Manager, says that the remainder of 1986 does not look as promising.

"Simply put, the new specialized applications business has not grown as fast as we had anticipated," Agans says. (See related story on ramping.) "And since most of the ramp was budgeted for the second half of the year, it will be more difficult to offset revenue misses with favorable exchange rates and cost deferrals."

GE Consulting Services Corporation (GECON) sales also are expected to be below Operating Plan, but both GECON and Software International are committed to deliver net income as budgeted.

"Project 36 remains viable," Agans says. "We've reaffirmed our commitment to corporate to deliver on our net income targets by using selective belt tightening while stressing top-line growth. And Larry Bossidy (GE Vice Chairman and Executive Officer) has reaffirmed his support for the business."

[Editor's Note: Look for additional details on the state of the business in the next issue of SPECTRUM.]

## SECOND QUARTER EARNINGS ON PLAN DESPITE REVENUE SHORTFALLS

Second quarter sales of \$125 million were 7% below 1985 but only 2% under Operating Plan, as the impact of favorable monetary exchange rates partially offset lower volume in Network Based Services and GE Consulting Services. Net income of \$4.8 million, although sharply below 1985, was equal to Plan. Favorable exchange, lower cost levels, and favorable tax rates helped offset the volume shortfall.

Second quarter results are summarized by business segment below:

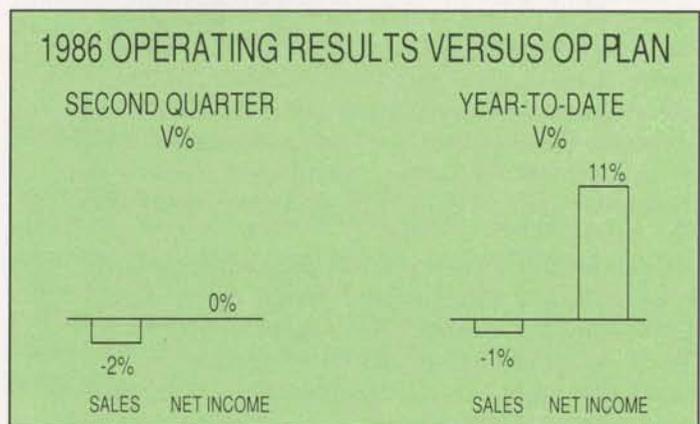
- o Network Based Services sales were almost on Plan, as favorable monetary exchange rates in International offset domestic revenue shortfalls. Despite strong orders, Marketing and U.S. Sales revenues fell 10% below Plan, as the realization of new business ramp was slower than anticipated. Net income was higher than Plan as a result of favorable exchange, cost reductions and deferrals, and lower affiliate taxes that more than offset the volume underrun.

- o GE Consulting Services revenue continued below Plan, reflecting a decline in volume and fewer billable contract personnel. Earnings declined substantially from Plan because of lower sales.

- o Software International sales were slightly higher than Plan, as the Masterpiece products were commercialized and a sales backlog recorded. Net income was almost on Plan.

For the first half of 1986, net income was 11% above Plan despite 1% lower sales.

The accompanying chart displays total GE Information Services second-quarter sales and net income compared with Op Plan, as well as a similar year-to-date comparison.



## DOING THE RAMP

There's a lot of talk about ramping accounts these days, but ramping has changed a great deal since the days of timesharing (see story to right). The new businesses at the heart of Project 36 require greater attention and new tools.

To better understand account ramping and its support programs, SPECTRUM interviewed John Sidgmore (VP & GM, U.S. Sales and Services Operation), Dave Foster (VP & GM, Focused Business Operation), Karen Pitelka (Manager, Retail and Financial Systems), Wayne Gowen (Manager, Corporate and Distribution Systems), Bill Gates (Manager, Manufacturing and Distribution Marketing), and Fred Wood (Educational Services Operations Manager). The following analyses are drawn from those interviews.

### Field View

Evaluating the latest numbers, John Sidgmore reports, "About 40 percent of our orders are ramping close to estimate, and around 20 percent have not yet begun to ramp. Most of the accounts in the latter category are 'misses' --such as clients who we have discovered do not have the degree of commitment to the product that we had originally thought." Engagement plans--which require all clients to sign off on a joint ramp plan and dedicate funds for the effort--are one means of verifying client commitment.

In addition, Sidgmore continues, "Better qualification techniques--such as up-front pricing or installation fees--should help us determine which clients are really serious and committed to making orders happen. The importance of such an assessment shouldn't be overlooked. We've found that custom orders ramp extremely well and that larger orders ramp better than small ones. In both cases, there is usually up-front commitment to development and installation before the client goes forward. Essentially, the client has to make the key decision prior to the order, in contrast to many of our new orders, where the key commitment comes after the order."

Overviewing specific product arenas, Sidgmore offered the following insights. "When clients are committed--for example, Kodak and Montgomery Ward--EDI can be ramped very effectively. We think that an SDC team that personally ramps clients

can expedite the process, so about two months ago we added a 30-person team to do just that. These people do the front end of the process, which is then handed over to Dave Foster's telephone ramp group. We may need to add more people still. Overall, I think the EDI ramp will keep improving.

"In office and dealer products, we've organized marketing/engineering/SDC teams to evaluate products and enhance their flexibility. We're developing improved product modification tools that are designed to enable SDC to make better and faster product modifications. In addition, we may need to

### WHAT IS RAMPING?

Providing perspective, Jim McNerney notes, "In the timesharing days, you'd flick a switch, and the account would be ramped. We did all the processing ourselves for individual clients, dealing with a few MIS specialists.

"Now, accounts can have hundreds or thousands of users. Micros and minis are everywhere, and our ramping is changing to accommodate that reality."

Account ramping generally begins when a contract is signed and continues until the account reaches its ultimate MPR potential. For convenience, often an account is designated as new if the contract was signed in the current year, as a ramp account if the contract was signed in the immediate past year, and as a base account if the contract was signed prior to that.

Ramping includes all activities designed to "get business from clients faster," as Wayne Gowen observes. When an account is not producing revenue at its projected pace, there is a natural tendency to assume that there's a "ramp problem" that can be overcome by redoubling efforts or undertaking specific remedies. In some cases, however, apparent ramp problems may actually signal other difficulties--for example, clients with insufficient commitment, overoptimistic or long-lead MPR projections, or clients with economic challenges of their own (in this sense, a bankrupt client represents the ultimate ramp problem).

The key to identifying genuine ramp difficulties therefore lies in careful analyses of individual markets and accounts.



Photo by Sallie Chater

The centralized telephone sales and implementation team--GE Information Services' secret ramp weapon--supplies key leverage to aggressively ramp EDI accounts. Pictured above in the left row front to back are Noriko Iwaski, Karen Gonzales, and Odessa-Pitts Tally; in the right row front to back, Fritz Stralley, Paula Houck, Robin Corley, and Leanne Van Slyke.

add some SDC people--and an up-front commitment pricing policy will go a long way toward fixing office and corporate ramp problems.

"The VAN accounts are overall on target. POS got a late start--we didn't commercialize the product until the end of the first quarter--so it's too early to evaluate POS ramp."

The Training and Documentation groups are working to improve ramps across product arenas, focusing on materials that facilitate the kind of mass implementation that the company increasingly faces. In selected cases, as Fred Wood explains, "It makes sense to conduct classes on a regular basis around the country on specific products, such as EDI. And we're investigating ways of holding such classes without making a large hardware investment--for example, by holding the classes in Businessland outlets."

When clients have so many users that classes become infeasible, the Client Training Group (see last month's SPECTRUM) develops task-oriented tools or job aids that are step-by-step user's instructions keyed to tasks that end users recognize (such as "send a message"). Moreover, Wood observes, "Training is developing computer-based training for clients with large numbers of users. These training diskettes employ real screens from

the applications, superimposing instructions on how to use the application."

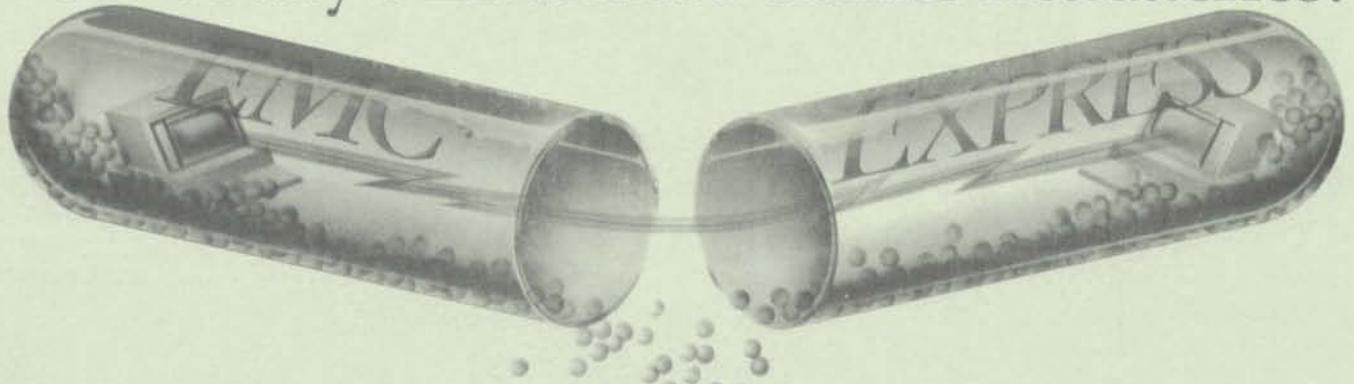
Training also is working closely with Documentation to develop quick-start documentation that is a hybrid born of users guides and job aids. "Such documentation attempts to summarize the most commonly used features. Ideally, you'd find 80 percent of the material you need as a user in 30 pages--on the rare occasions you need the other 20 percent, you can refer to the extended documentation."

In addition, Training personnel like Reynold Stimart (Manager, Business Application Training) are working with application developers--for example, BusinessTalk developers--on embedding help screens in the applications and ensuring that the help screens are user-friendly.

## EDI

Discussing EDI in more detail, Dave Foster observed, "Overall, I would emphasize the extreme importance of understanding the large number of end users in EDI and their impact on how we do business. We often need to ramp hundreds of clients on a major sale, many of them small or medium-sized companies.

# What do doctors take for speedy relief from today's insurance claims headaches?



The General Electric  
*EMC\*EXPRESS* System.

## The Electronic Medical Insurance Claims Delivery Service

The advertising campaign illustrated above represents one of the new approaches that FBO is using to ramp EDI accounts--in this case, reaching out directly to the physicians associated with EMC\*EXPRESS accounts.

"Such a client structure means that we must have easy-to-use products, well organized and straightforward documentation, compact contracts, a simple credit procedure, and many other systemic changes."

Moreover, the unique EDI client structure encourages an industry focus. Foster explains, "When you ramp a department store account, for example, you find that the next department store client has essentially the same trading partners. Thus, our acquired effort cross-applies and saves us time and money on subsequent sales to the same industry. We have to pick industries and systematically go after the industry leaders."

In the manufacturing and distribution EDI market, Foster says, "We've brought EDI\*PC on line and simplified its original documentation into a quick-start version. In May we put a telephone support group in place for follow-up phone sales and implementation assistance. We're also focusing on technical support, which is tough when you're dealing with a large number of differing systems. Bob House is working on a cheat sheet that should help SDC or

telephone account rampers tell clients how to deal with specific types of minicomputer systems, such as the System/36.

"Perhaps most importantly, we're trying to evaluate the hub's enthusiasm for EDI; if our contacts aren't enthusiastic or don't have enough power to push the project with their trading partners, we shouldn't be making the sale. We're also monitoring and exerting more control over the hub client's participation in vendor conferences --for example, the wording and source of invitations is important."

In the health care industry, Foster notes, "We may make simple, direct sales to Blue Cross or Blue Shield, for example, but then there are thousands of individual doctors to ramp. We're addressing them through third party software companies--we currently deal with forty such resellers--and we've initiated an up-front qualification procedure by charging a fee to ensure their interest. We also must be sensitive to the fact that these vendors don't always have the same priorities that we do, so we're pulling vendors via direct mail.

"We developed pre-packaged training and marketing tools and made Pat Kennedy's sole function the provision of marketing support to the software companies.

"In addition, in an exciting new development, we've joined with Blue Shield of Illinois in a direct mail program that reaches 18,000 doctors. A bill stuffer describes the advantages of EMC\*EXPRESS and lists seven authorized software vendors. Here we're trying to encourage doctors to call authorized vendors and new system vendors to sign up with us."

### Corporate and Dealer Systems

In contrast to EDI, POS, and PSO--which are industry targeted--corporate and dealer systems build on a base product or capability tailored by the field and SDC to solve a client's specific problems.

Gowen notes that corporate and dealer systems are implementing several ways of improving both forecasting accuracy and product implementation. "We're optimistic that these approaches will improve our performance and may even have application in other business arenas.

On the forecasting side, Gowen describes three approaches under way to improve forecasting:

- o Earlier this year, detailed qualification screens for applications and products were developed to help sales personnel identify real prospects. This effort already is having positive impact.

- o Quantification tools soon will be available based on a model that considers factors such as number of locations, number of users, use per week, and types of messages. These tools should enable the client and GE Information Services to gain a clearer understanding of expected performance.

- o Sales and marketing personnel are being asked to develop and manage to detailed ramp plans that sales and marketing personnel can use on a day-to-day basis for working the account to expected ramp levels.

On the product and account implementation side, corporate and dealer systems are undertaking improvements in two areas:

- o Field performance: The group recently piloted a successful implementation course for SDC and sales personnel to improve account rollout, including a

guide for putting together proposals and implementation plans and installation check sheets.

- o Client motivation: Additionally, corporate and dealer systems is looking at employing strategic front-end pricing as a reality test for client commitment, using the Client Training group to tailor documentation and training to clients as a measure of commitment, and forming teams of high-level client employees with visibility and commitment to help with the product ramp.

### VAN

Explaining the VAN approach to ramping, Karen Pitelka notes, "Through a concerted joint effort by technical, sales, and marketing personnel, we've successfully put in place a process that addresses the two sources of ramp challenges: connecting client hosts to the network and deploying software to mini-remote concentrators (MRCs) and central concentrators (CCs) in support of the new capabilities that we're constantly adding to the network. We think we can continue to improve our ramp performance, so we will be monitoring the effectiveness of the process.

"A new team has been established in Telecommunications Engineering to handle all host connections for new clients. This team works with Sales and on-site NDC personnel until a client is operational.

"Software undergoes stringent testing prior to deployment to ensure minimal impact on clients' operations. And the SDC organization is taking proactive sales ownership of the client relationship during the critical host connection process.

"Our success here is particularly important, because there are a lot of competitors in our market, and the service is so central to clients that if they don't actually have two vendors, they definitely have an alternative supplier waiting in the wings."

Another key to keeping VAN clients happy is to "be responsive, to give a lot of technical, sales, and product support. Our clients have to be comfortable that we know what we're doing," Karen Pitelka notes. "In our market, we have to convince telecommunications managers, who know the technology thoroughly, that we can sustain high-quality service. It's not so much that a client will leave if the system goes down, it's that clients will leave if the system goes down and you're not responsive and fail to reassure them that service will be restored shortly."

## TRADE\*EXPRESS: ALL ABOARD!

On June 17, GE Information Services, the United Kingdom's Simplification of International Trade Procedures Board (SITPRO), and the First National Bank of Chicago (FNBC) held a press conference in New York City to announce the commercial availability of the TRADE\*EXPRESS System, SPEX™\*US software, and the Accelerated Trade Payments (ATP) service.

### TRADE\*EXPRESS

The press conference dovetailed with the three-day International Trade and Computerization Conference hosted by the National Council on International Trade Documentation (NCITD), where GE Information Services personnel--Nadine Rosenbaum, Marilyn Culican, Mike Katzaman, Don

and its capabilities.

Currently available in the US, TRADE\*EXPRESS is scheduled for commercial availability worldwide in September. "TRADE\*EXPRESS is one of GE Information Services' entries in the increasingly important intercompany, global market," observes Jim McNerney (Senior Vice President, Marketing and US Sales Operations).

Dave Foster (VP & GM, Focused Business Operation), emphasized at the press conference, "Major corporations need to think in terms of global markets and competition. Parts, subassemblies, assemblies, and finished products are often separate operations in different countries....

TRADE\*EXPRESS addresses the source of many freight and trade documentation errors, namely the density of paper across companies--which frequently

represents a mismatch with the way companies do business internally. Within firms, automated methods have made great progress...across firms, it's still a paper world."

TRADE\*EXPRESS essentially is a computerized service for creating, processing, and

distributing international trade documents among exporters, freight forwarders, banks, carriers, custom house brokers, and other participants in the international trade process. Once the sales contract and payment arrangements are made, TRADE\*EXPRESS can be used to create, deliver, and track the information appearing on critical shipping documents, such as export declarations, ocean bills of lading, commercial invoices, delivery permits/dock receipts, shipment advisories, insurance certificates, and the like.

TRADE\*EXPRESS can be configured to meet a company's individual requirements and can include all or some of the following components: document processing, electronic data interchange (EDI), translation services, electronic mail, and teleprocessing management. Fundamentally, TRADE\*EXPRESS represents a higher layer of value added built on top of the basic EDI\*EXPRESS and QUIK-COMM products.

Photos by Jim Lukoski



Top, from left to right, John Barber, Dave Foster, and Ray Walker listen to Jim McNerney (shown in picture at right) as he addresses the press (bottom).

Greenwood, and Ann Harrison--explained and demonstrated TRADE\*EXPRESS at an exhibit booth. John Barber, the new Manager of International Trade, calculates that roughly half of all potential US TRADE\*EXPRESS clients were represented at the conference--and hence exposed to TRADE\*EXPRESS

By using the EDI component of TRADE\*EXPRESS, companies can send and receive data in an environment that accommodates accepted data security procedures and that essentially provides a common data base for the multiple parties to the trade transaction. By combining TRADE\*EXPRESS with the QUIK-COMM System, companies can implement EDI transactions with free-formatted messaging capabilities. In addition, QUIK-COMM allows companies to exchange documents with business partners who are not prepared to process EDI transactions.

GE Information Services also developed workstations that act as intelligent communications gateways to TRADE\*EXPRESS teleprocessing components, thus forming an integrated system that includes easy-to-use interfaces for document processing, word processing, EDI, and electronic mail. Workstation software is designed to operate with document processing systems--such as the SPEX system versions developed for use in the UK and the US--that have been validated for use with the workstation.

Explaining the advantages of TRADE\*EXPRESS, Foster noted at the press conference, "The orderly conduct of international trade, along with the accompanying concerns of productivity and cash flow, depends largely on two things: the accurate

creation of highly detailed and specialized business documents and the reliable transmission of these documents--and an equally reliable receipt of such documents--to business partners."

TRADE\*EXPRESS is designed to improve the speed, accuracy, and efficiency of international trade documentation processing, thus reducing costs, enhancing productivity, and thereby sharpening clients' competitive edge. For example, one client reports that the typical trade payment cycle can be reduced by four to 26 days, which can translate into faster payments and improved cash flow.

Foster notes, "The elimination of redundant data entry costs can improve inventory float, encourage more prompt payments, decrease capital investment needs, and offer a competitive advantage....The pay-back on up-front investment in TRADE\*EXPRESS should be quite high even for small and medium sized exporters. The product is highly significant for major exporters and importers, global manufacturing firms, banks, forwarders and cargo managers, transportation carriers, and computer telecommunication firms."

## SPEX\*US

Addressing the press, Ray Walker (Chief Executive, SITPRO) observed, "In many ways, today



Nadine Rosenbaum discusses TRADE\*EXPRESS with an interested NCITD conference participant.

is the culmination of twenty-five years of effort. Following the efforts of Swedish customs officers in the 1960s, SITPRO decided to develop a micro-computer solution for the morass of paper documentation associated with international trade. SPEX 1 appeared in 1982 and SPEX 2 in 1984. Over 400 companies in Finland, Norway, the Netherlands, Israel, Hong Kong, and Australia now use a version of SPEX.

"Today we're offering SPEX 2.2 in the US, and SPEX 2.3--just introduced last month--should be available in the U.S. within six months."

The SPEX\*US software package, an export consignment and invoice processing system, enables a company's mainframe or micro computer to interface with TRADE\*EXPRESS to distribute documents and to receive information needed to process and create additional documentation. GE Information Services modified SPEX 2 software to create export documents based on standards that NCITD created for the Cargo Interchange System (CARDIS).

Walker noted at the press conference, "At SITPRO, we like to talk about telematics--a combination of computer software development and telecommunications. Telematics is a very dynamic source of change, and we feel GE Information Services offers a strong base for telematic development. SITPRO is very strong on standards, and we need to work with a company that understands that commitment. We're delighted with our distribution agreement with GE Information Services."

## ATP

Combining FNBC's expertise in international trade with GE Information Services' worldwide teleprocessing network, the ATP service is designed to eliminate delays in receipt of international trade payments.

By using friendly software based on personal computers, exporters can capture export documentation data by creating a consignment file that is then processed and transmitted electronically to FNBC for payment. Additional information can be added and processed by the freight forwarder and carrier and subsequently transmitted to the bank.

*Continued on page 29*

## AGREEMENT WITH WILDATA ANNOUNCED

On June 11, GE Information Services and WilData, a specialist in cargo management information systems, held a press conference in London to announce a new agreement under which WilData will use MARK III to market and bill (under the name WilNet) a manifest processing system to its cargo and shipping customers. Lars Morten Laache, the WilData Account Manager at GE Information Services Norway--who teamed with Eric Vaes (Manager, Marketing and Business Development, Northern Europe) and a strong supporting cast to close the WilData sale--projects annual revenues of a minimum of one-half million dollars by 1987.

Ian Finch, Manager of Industry Marketing for International Sales and Services Operations (ISSO), observes that this agreement "with a well-qualified and respected organization should help to expand GE Information Services'



Lars Morten Laache

coverage of freight forwarding and related sectors more rapidly than otherwise would have been practical and should enhance and consolidate our already strong position in trade and logistics, complementing existing services such as TRADE\*EXPRESS."

## WilData

Wilhelm Wilhelmsen, Norway's largest shipping group, established WilData (originally a shipping agent systems department in its liner business) as a wholly owned subsidiary in July 1985.

Wilhelmsen's strategy--to develop new value-added products that expand its technological and geographical reach--was refined to include WilData following a study that identified effective computerized support as a critical success factor in the cargo management business. WilData's business portfolio currently includes:

- o WilShips, a comprehensive and flexible liner agency system available on a wide range of hardware that projects ten installations annually.

Evaluation is underway to operate WilShips through the MARK 3000™ Service by next year. A beta test is taking place this summer.

- o WilNet, a manifest processing system that currently uses MARK III for transmission and clearing and will be transaction-priced based on the number and size of documents transmitted.

In addition, WilData US--currently represented by Bob Foley and Conrad Persels--will be developing a series of complementary PC-based products aimed at facilitating trade-related information flow and control as front-end software to the WilNet service. These products will be marketed worldwide.

John Barber (Manager, International Trade Systems) notes, "We already are well on our way in implementing the WilData value-added service provider [VASP] agreement in the US. WilData is beginning product development, and we are discussing additional areas in which we can profitably cooperate with WilData in marketing to the US export community."

Stephen Byrne, WilData Managing Director, projects, "The total market for WilData systems will be over \$1.2 billion by 1990, which gives us plenty of scope to run a profitable and successful service... Together with companies like GE Information Services, WilData aims to help shipping and shipping-related companies thrive, expand, and gain a competitive edge over their rivals... Companies that fail to automate their information management as successfully as physical cargo handling has been automated inevitably will go out of business."

WilData has clients around the world, supported by regional offices in Oslo, London, and New York. WilNet's MARK III-based services are now available in Norway, the UK, and the US and may soon be extended to Australia and several European countries (targeted markets include Sweden, Holland, Belgium, France, and Germany).

### **The Agreement**

Under the joint VASP agreement--which is currently confined to the WilNet-based manifest processing system--WilData will purchase information handling capabilities from local GE Information Services affiliates and resell those services to shipping and cargo customers.

WilData will supply full sales, marketing, and client support in countries where WilData and the local GE Information Services affiliate have reached agreement (currently the US, Norway, France, and the UK; advanced-stage discussions are underway in many other countries). During the start-up phase in some countries, WilData may contract for limited client support from local affiliates at published rates on an as-available basis (with ample notice).

The service provided to users integrates the application processing of WilData software with the communications management capabilities of MARK III and QUIK-COMM. This total service thus can be provided in all relevant countries, because questions of basic QUIK-COMM use do not arise.

WilData is the first VASP signed in Europe by GE Information Services as part of its strategy to move into selected new markets through joint ventures with companies that provide complementary skills, coverage, or products that supplement and enhance GE Information Services' existing services. VASP clients work in concert with affiliates or distributors in countries covered by the agreements.

The WilData agreement was approved in March of this year by ISSO management after thorough reviews by Area Business Development, International Business Development, GE Information Services Norway, ISSO Marketing, and Marketing and US Sales Operations. WilData is a prime example of the type of company that will sign a VASP agreement, exhibiting characteristics such as:

- o Well-established expertise and success in a targeted market--or, as Finch describes it, "the ability to market, sell, and fully support well-defined, network-based services to well-identified end users in a given market niche."

- o A detailed and credible business plan that supports its ability to provide a higher-value service than GE Information Services alone.

WilData--like many potential VASPs--may pose some degree of competition with direct sales, so its activities will be closely monitored. But the narrow focus of the application and WilData's established expertise and market presence should make the risk of direct competition acceptable. Indeed, the enhanced market presence that GE Information Services will acquire may even strengthen the company's overall competitive position.

## METROPOLITAN COMES THROUGH FOR ROCKVILLE EMPLOYEE

[Editor's Note: Last spring, Paul Tubach (Products and Services Pricing Manager) went to his doctor for a routine check-up. The physical and follow-up tests revealed a malignancy that required prompt surgery. Paul is back on the job now, feeling better, and has kindly offered to share his experience with Metropolitan Life Insurance Company with SPECTRUM.]

"I'd called Dick LeFebvre [Manager, Human Resources Practices] last January to complain about initial confusion during the hospitalization changeover to Metropolitan," explains Paul Tubach, "So, after my surgery, I thought it only fair to call and let him know how really pleased I've been with Metropolitan's service."

Tubach was particularly impressed by the ease of using the 800 number for precertification, the way Metropolitan followed up and worked with his doctor after he was hospitalized, the speedy processing of his claim, and the approach used in handling the one disallowed charge.

"I'm not saying that everyone will have the same experience that I did," Tubach notes. "There aren't any guarantees of that. But I do want to let people know that I didn't do anything special, I just followed directions--and the system worked well for me."

When he first picked up the phone to call the 800 number, Tubach anticipated getting a busy signal, but he reached a Metropolitan representative right away.

"I also expected a hassle in obtaining precertification," Tubach admits, "Because I only had 11 days before the surgery was scheduled rather than the two weeks that Metropolitan normally requires to process forms and issue approval for hospitalization. But the representative told me to have my doctor's office call, explain what was involved in the surgery, and project my length of stay in the hospital--the whole process was handled over the phone."

Six days after he called the 800 number, Tubach received a letter of confirmation that the doctor had contacted Metropolitan and that a hospital stay of seven days had been certified. "So, one week after the need for surgery was determined, I didn't have to worry about precertification anymore. And all it took was one phone call from me and one phone call from my doctor's office," Tubach emphasizes.

"People may have the impression that the precertification or second-opinion process will be complicated and demand a lot of paperwork--I know I did--but the way Metropolitan is handling it is easy. So don't be afraid to call that 800 number. You can get through, and the people are very ready to help you."

From an insurance standpoint, Tubach's hospital stay--originally estimated by his doctor at seven to ten days--was effortless. On the eighth day, Metropolitan called his doctor to ask his condition, whether he'd been released, and whether he'd need more time in the hospital. Told that Tubach was progressing well and probably would be released in a couple of days, Metropolitan granted a four-day extension over the phone and sent follow-up letters to Tubach and his doctor.

"I was really pleased. I didn't have to do anything after the initial inquiry, and the process was very simple for my doctor as well," Tubach recalls.

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**"So, one week after the need for surgery was determined, I didn't have to worry about precertification anymore. And all it took was one phone call from me and one phone call from my doctor's office."**

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The claim processing was no less impressive. In slightly over three weeks after the surgery, a check was on its way to the surgeon, and Tubach received a letter confirming that payment. The other health care providers--hospital, radiologist, anaesthesiologist, and out-patient facilities--received payment within two to three weeks after submitting bills.

"I've had a lot of experience with other carriers that can go unnamed," Tubach reports. "And none of them ever paid bills in less than a month at best. And these bills had thousands of dollars of detail--I'm sure they weren't easy for Metropolitan to process."

## AED INTEGRATES NPIP INTO OPERATIONS

Metropolitan only disallowed one portion of one bill (\$50 of an item was over and above Metropolitan's reasonable and customary charge for that service). "The way they responded to that dispute was what impressed me," Tubach explains. "They notified me by letter of the disallowance, but they went further. They said that if the provider attempted to bill me for the disputed amount, I should send the bill to them, and they would attempt to resolve the matter. I never expected that from an insurance carrier."

Reflecting on the entire experience, Tubach says, "I was very glad for the support of my family and all the people working with me in NSO, AMO, and FBO. It made it easier. And not having to hassle over medical claims was a real blessing.

"No one needs additional financial stress when already under medical stress (expected or unexpected). Metropolitan really came through for me on that score."

[Editor's Note: Watch for more information on reasonable and customary charges in next month's SPECTRUM.]

The Applications Engineering Department (AED) in Technology Operations moved quickly to support and complement the New Product Introduction Process (NPIP; see the May issue of SPECTRUM) by distributing new standards and procedures in late May that are built around the new internal product development process.

These new standards and procedures are designed to facilitate NPIP by bringing AED and Marketing together for detailed information exchange earlier in the product development process. In addition, AED and Marketing personnel communicate on an ongoing basis throughout NPIP, improving AED's ability to respond to Marketing's needs and giving Marketing a better understanding of the feasibility and time constraints associated with various Engineering specifications. [The other three Tech Ops divisions--Telecommunications, MARK III, and MARK 3000--are responsible for base technology and don't interact as frequently with Marketing as AED does on a day-to-day basis.]

AED personnel and product managers from AMO, FBO, and PSO reviewed the proposed procedures. The new standards and procedures don't differ radically from previous guidelines, but they do draw on NPIP, conform to NPIP stages, and expedite AED's entry into that process.

Cathy Michalak, Manager of AED Program Quality and Integration, noted, "These procedures enable AED to generate more realistic and timely estimates of work requirements and delivery dates. Such earlier and more accurate estimates make the entire product development smoother and more practicable. Before, Marketing needed firm dates, but AED couldn't supply them until late in the cycle. So Marketing made plans, AED offered ideas later in the process, and conflicts naturally arose."

In short, as Dave Nobile, Program Coordinator, says, "Our methodologies should improve the functioning of AED and NPIP and should help us to deliver quality products on expected delivery dates."

In the picture at left, Dave Nobile (left seated) and Cathy Michalak (right seated) show the newly issued AED standards and procedures manual to Chris Pittman, Manager of Marketing Program Quality and Integration (center standing).



photo by Jean Sunderland

## SPOTLIGHT ON: RAY BROWN

If you saw the closing Liberty Weekend ceremonies from New York City on July 6, you probably didn't spot Ray Brown (NDC Area Manager, NYC) and his wife Sue--but they were there, square dancing for three minutes and thirty seconds with 99 other couples selected by audition for the closing ceremonies at Giants Stadium (Meadowlands).

"We really got caught up in the excitement of Liberty Weekend," Ray Brown notes. "It was one of the largest celebrations in the country, and we feel we participated in the biggest show there'll ever be."

Closing out Liberty Weekend with a square dance seems quite appropriately American, but the organizers did take a few liberties with what Congress annually declares "the national dance." For example, the July 6 performance was choreographed and didn't use the traditional caller. In contrast, when the couple square dance at their local Nanuet (New York) club, the Covered Bridge Squares, they respond on the spot to the caller's instructions.

"You really can't anticipate what the caller will do," Sue Brown says. "Whether you're in a line or in your corners or some other configuration, the caller

always has many options. We're in the Plus level--the third of five square dancing proficiency levels--and we have to be prepared to execute 60 calls--such as swing through, ocean wave, or allemande left to corner--all on the spur of the moment in response to verbal calls. It's never dull!"

The Browns, who recently celebrated their twentieth wedding anniversary, began square dancing about three years ago after seeing a demonstration at a 4-H show. "We thought, here's something we can do together, and it's fun, a great way to relax, and very inexpensive," Ray Brown recalls. "We took traditional Western square dancing lessons for about a year, and we've been dancing ever since, about twice a month with the club and several other times each month with other clubs or in square dancing demonstrations. We've given demonstrations at big companies like ITT and in supermarket parking lots--and we recently gave lessons at an adult education class for 18 people."

The Browns just concluded a year as co-Presidents of the Covered Bridge Squares, and they attend several square dancing conventions each year. The



After a brief moment of concern over the rabbit in Ray Brown's up-and-coming garden (their daughter and her friends drove the varmint out), the Browns struck a traditional square dancing position and demonstrated the bow that concludes a square dance routine.

annual national convention draws 30-40,000 square dancers, and regional conventions--for example, in Montreal in the summer--also have appeal. Moreover, as Sue Brown notes, "You can square dance on vacation, too. There's a national directory of clubs that tells you when they dance and how to contact them. And even if you want to square dance in Japan, the calls are always in English, so you can walk right in and dance."

The couple auditioned for their spot in the Liberty Weekend closing ceremonies in response to a letter that David Wolper (Hollywood organizer of the New York City festivities) sent to square dancing clubs in New York and New Jersey. "Almost 500 couples auditioned," Sue Brown explains. "We were scheduled in groups of eight--a traditional four-couple square--and we only danced for a few minutes. But since then we danced our way through ten rehearsals and stood still for costume fittings--and danced in the actual performance."

"It was an unbelievable experience," Ray says. "The excitement was so real--you can see these things on television, but when you're actually there, the excitement is just overwhelming. You get so wrapped up in it that you don't realize that anyone else is around--not even the other dancers in our performance, except for the other six in our square."

"It was a real American experience, with all the American eras represented. We'd do it again in a minute!"

"You know," Ray Brown recalls, "some friends of ours tried to interest us in square dancing ten or twelve years ago. If we'd known how much we were going to like it, we'd have started sooner!"

Ray Brown joined GE's Watertown, Massachusetts, Medinet group in September 1972 as a computer programmer. In 1974 he moved to the Schenectady NDC and then on to the Chicago NDC in 1975. In 1978, he transferred to New York, where he has worked at the Elmwood Park (New Jersey), White Plains, and New York City facilities.

## NEW MANAGER OF EUROPEAN OPERATIONS

Richard H. Meltzer has joined GE Information Services as the Manager of European Operations. Dick is based in Amstelveen, The Netherlands, and is responsible for the Supercenter, European Network Operations and Planning, European Operations Engineering Support, and European Quality Engineering.

"This is a fantastic opportunity for me, because it lets me combine my technical and operations management experience--with an emphasis on quality and service--with my customer and market development background," Dick says. "With the great teams already in place in Europe, we can't miss--as long as we all work together."

From 1984 to 1986, Dick served as Manager of Business Development for a newly created GE internal venture, the Silicon Systems Technology Department (part of the Semiconductor Business Division in



Richard H. Meltzer

Research Triangle Park, North Carolina). Dick was responsible for creating and implementing the business, market, and sales strategies.

Dick's wide-ranging experience includes positions as Manager of GE Space Division's Information Management Systems Operation (Gaithersburg), as Research Scientist for GE's Information Systems Programs (Arlington), and as a faculty member at the University of Maryland (focusing on cognitive studies and the then-emerging field of software psychology, the human performance aspect of software engineering). Dick holds a Ph.D. from the University of California (San Diego) in Human Information Processing ("somewhere in the middle of artificial intelligence, computer science, math modeling, and experimental/cognitive psychology") and a BA in Psychology from Johns Hopkins University.

Dick likes to point out that his job as European Operations Manager isn't his first foreign assignment. "Between my junior and senior years at Hopkins, I served a two-year tour in Tanzania with the Peace Corps, teaching engineering, math, and English and acting as financial administrator for a college. I'm really enjoying 'going international' again."

photo by Jean Sunderland

## GOOD NEWS

### **Brown Brothers Harriman & Company**

Brown Brothers Harriman & Company (BBH) has signed an MCSS Agreement and a MARK\*NET Agreement to link its over 400 users and BBH branch offices worldwide to its host mainframe information systems. BBH, a major New York banking and brokerage firm, will be replacing current usage of PDN/IRC/Telenet links with MARK III and MARK\*NET.

Steve Harwin, Account Executive, notes, "The decision was made based on BBH's need to improve service to clients, as well as to provide local support where needed." QUIK-COMM will be used to support all of BBH's messaging and file transfer needs. BBH executive management stated that their decision to select GE Information Services was based on the need to improve service to their clients and, in some cases, on request by customers that were already clients of GE Information Services.

Morris Schwartz, SDC/New York, will manage the communications support for BBH.

### **Chase Manhattan Bank-Asia**

Chase Manhattan Bank-Asia signed an MNA with GE Information Services to use TRADE\*EXPRESS in Asian and Pacific countries, including Hong Kong, Korea, Taiwan, Japan, Singapore, Australia, and the Philippines.

Key to the success was a team effort by Dennis Ng (Account Manager, General Business) and Simon Lee (Account Manager, Banking). Dennis had promoted the TRADE\*EXPRESS concept to a number of export companies and freight forwarders, while Simon had promoted TRADE\*EXPRESS to Chase Manhattan as a product that could be used to win more business, particularly from the export community.

"After a successful meeting between Chase and several key exporters and freight forwarders, it was merely a matter of how quickly we could provide the product," notes David Rolls, Manager, Hong Kong. "Chase is now actively marketing the product and already has signed participants for two trading loops."

### **Convention Liaison Council**

The Convention Liaison Council (CLC), headquartered in Washington, D.C., comprises 20 organizations representing the convention, meeting, trade show, and exposition industry and the travel and tourism industry to work collectively to exchange information, recommend solutions to industry, and create an awareness of the magnitude of the industry. The Electronic Mail Drop System in development for the CLC will use GE Information Services to transmit hotel reservation requests from convention bureaus in 16 cities to independent hotels and major chain hotels (Marriott, Hilton, Hyatt, and Weston, for example).

The CLC informed Tom Butler, Account Manager, that "the proposed reservation system not only will save considerable money but also will give the industry control of the large number of hotel rooms reserved and cancelled for conventions."

Bob Rowe is the Project Manager for the account.

### **Federazione Italiana Editori e Giornali**

Federazione Italiana Editori e Giornali (FIEG), a federation of 901 Italian publishing companies, recently signed a contract with GE Information Services to use MARK III and INFORETE, a system that is designed to enable publishers to automate, monitor, and better allocate the distribution of magazines, papers, books, and other publications. FIEG selected INFORETE after an initial qualification process and a subsequent evaluation of software prototypes from GE Information Services and from IBM.

FIEG includes almost all Italian publishers (most notably the six largest) and acts as a unique coordinator, promoting and defending its associates' interests.

INFORETE currently serves seven of the most important publishers and 16 major distributors. Another 30 distributors should connect to the system by the end of 1986, and 150-200 distributors are scheduled to be on line by the end of 1987.

"This application is designed to optimize the distribution cycle, minimize costs, and bring the entire distribution process under control," reports Pierluigi Giani, District Manager, Northeast Italy.

## INDUSTRY BRIEFS

"The client was very enthusiastic about our capacity to manage big projects and about our network."

### **First Interstate Bancorp**

First Interstate Bancorp, the eighth largest financial holding company in the US, has selected MARK\*NET as the delivery vehicle for its new cash management product line. This strategic project is the first inter-affiliate venture for this bank (which has 15 western state bank members) and will provide corporate services to 3,000 commercial clients.

Quentin Gallivan, Account Manager, notes, "GE Information Services was selected because of a proven track record in the financial industry and superior network reliability."

Sonny Tom and Vikki Schanz provide the technical support for the account.

### **Wells Fargo Bank**

Wells Fargo Bank, headquartered in San Francisco, is currently the tenth largest bank in the US because of its recent acquisition of Crocker National Bank. Wells Fargo Bank has been providing automated balance reporting services to its clients worldwide for over seven years, using GE Information Services' Information Express™. Now, Wells Fargo Bank has selected GE Information Services to provide these services to the client base acquired from Crocker. This is a major competitive win, because Crocker formerly was the single largest cash management client of ADP Network Services.

Wells Fargo Bank Senior Vice President David Kvederis told Peter Mannetti and Phil Woodworth that the success of the very aggressive schedule for the acquisition would "hinge on the cooperation of the vendors." Furthermore, Information Express Product Manager Linda Coven told Phil Woodworth, Account Executive, that GE Information Services has been their "most cooperative and supportive vendor in the migration of Crocker to Wells."

Florence Chang and Verna Wong manage the technical support for the account, including training the new administrative staff at Wells Fargo Bank on the system, developing a three-phase implementation plan, and supplying new software to handle conversations among the various bank catalogs.

### **Cygnnet Technologies**

Cygnnet Technologies Inc. announced a memory-resident communications program, Get. Get is a 64K-byte package that runs (in background) on the IBM PC and compatible systems, checking designated electronic mail services at times specified by the user. If messages are waiting, Get flashes a message in one corner of the screen without disturbing other applications.

According to Get's marketing manager, Ken Dickens, early tests showed that using Get doubled or tripled the use of electronic mail in the office. The program comes with interfaces for MCI Communications' MCI Mail, Western Union Co.'s Easylink, ITT's Dialcomm, The Source, GTE's Telemail, GE Information Services' QUIK-COMM and GEnie, and other commercial services.

### **DEC**

Digital Equipment Corp. (DEC) recently became the first computer company to offer users a complete set of commercial networking products conforming to all seven layers of the Open Systems Interconnect Standard.

The breakthrough came with DEC's announcement of an electronic mail package that enables users to generate messages on a DEC proprietary editing or E-mail system and then to transmit the message to a remote VAX or Micro-VAX system. The package is called the Message Router X.400 Gateway Version 1.0. DEC now becomes the first to offer a commercial software product designed to implement the X.400 protocol.

### **Western Union**

Western Union announced plans to link the 7,000 credit authorization terminals installed by merchants for whom NaBanco processes credit card sales slips. These terminals will be linked by Western Union's packet-transport network to host computers in Florida and New York. Western Union will develop protocol conversion to NaBanco's specifications. NaBanco serves 35,000 merchants in 50 states and the Caribbean.

## ADMINISTRATION

**RICH OKRASINSKI  
NEW YORK**

*Who is the support person for the Targeted Opportunity System (TOPS)?*

It's Bryan Inderrieden in Saddle Brook, New Jersey, on 8\*227-3020 (QUIK-COMM: INDY). TOPS is the PC-oriented program on AR22 that you download to your PC.

Bryan is also the support person for the ACT program--Activity Tracking.

**TERRY SNYDER  
GREENSBORO**

*Do you have a list of the EDI brochures and manuals available from OLOS?*

Yes. Here's the list supplied by Joyce Alexander, EDI Communication Specialist:

- 5070.06 EDI\*EXPRESS Profile
- 5707.07 Making Business As Easy As a Handshake--brochure
- 5707.19 Introduction to EDI--A Primer
- 5707.73 EDI\*EXPRESS--insert to Handshake brochure
- 5707.74 Heavy Industry--insert to Handshake brochure
- 5707.75 Office Products--insert to Handshake brochure
- 5707.05A EDI\*EXPRESS Systems Description
- 5070.15 EDI\*PC Profile

5070.73 is due into the warehouse in FW24. There's an internal charge of \$2.00 for 5070.19--the Primer.



**FAST-FAX**  
8\*274-6517 QK: FAST

**BOB GRAY  
NEW ZEALAND**

*Can you help me identify a pirate user? It's MX48007, belonging to GE Aircraft Engine. Which cost center should I contact to get revenue credit for this usage?*

You're already getting revenue credit, because MX48 is a MARK\*NET catalog. The system is keeping track of your territory's usage, and rather than have you bill and collect from the client, we bill the client and credit your cost center for the usage at your current rates. Cool it on this one, you're covered.

**SUE MONIHAN  
BOSTON**

*Are PAR data recorded through the last day of each month, or are there exceptions when weekends fall at the end of the month?*

PAR data are recorded through the last day of each month. The only exception is for a job that may have started before midnight at the end of the month and is carried over into the first day of the next month. PAR data are usually available for client use within three or four business days after the end of the month.

**SHERRIE KEY  
ARLINGTON**

*Is there a special form that must be signed to get a Continuous Access Plan on Foreground for a client?*

No signed form is necessary. Have the client write a letter expressing his or her go-ahead, then do a mailbox to set it up.

Here's the syntax in the Mailbox program: SET, CAP,2,100. This sets two CAP ports for U# 100. SET, CAP,0,100: This cancels the 2 CAP ports.

This feature is not exclusive to USA clients. Some distributors have CAP plans also, but you'll have to get details about each CAP plan from each country.

**DAVE JACOBS  
DENVER**

*Is there something wrong with the SAMIS month-to-date report for Corporate IDs? I can't seem to find any data for PROFS work done in VM.*

Some of the newer products have not been coded into the SAMIS report system as yet. You may be able to get a status report on when it will be available by sending a QUIK-COMM to SSYS.

**LANA EREMIN  
MELBOURNE**

*Can you tell me the local sales office that handles Dothan, Alabama?*

Your request for assistance for an unfocused ISSO prospect in Dothan, Alabama, should not be forwarded to the sales office that is physically nearest to Dothan.

The realignment of the sales force and its direction to call on specific accounts necessitated the formation of National Technical Support (NTS) here in Rockville. The sales force transitioned thousands of small accounts to NTS for centralized support.

NTS has a staff of sales and technical personnel that conducts business by phone (and visits client sites when absolutely necessary). The staff accommodates the technical and administrative needs of these clients and supports prospects who want to use our service. Some prospects are directed to NTS from the field sales people; some prospects come in from distributors who have an application that is in operation in a distributor country and who require support for a client in the USA.

If you have such prospects, they should be directed to NTS. If the revenue opportunity is large enough and requires a level of support that justifies local field support, then the appropriate SDC office can be brought into the action.

Generally speaking, if you need to have a client in the USA contacted for support in an ongoing application, you should notify NTS of the opportunity and let that organization pursue it. The contact for this action is Mike Gwinn, whose QUIK-COMM System address is MIKEGWINN.

## DELIVERY SYSTEMS

**RALPH SACCO  
NEW JERSEY**

*Is there something wrong with my RID? I'm using a plain, old, ordinary user number into MARK 3000 Service from a dumb terminal, but I keep getting a message that says LINE TOO LONG, RETYPE IT.*

The message is coming to you from the MRC, not from MARK 3000 Service. You must change the network parameters for your session. Full details on changing a network session are in an on-line MARK 3000 file. List NEWS K(SIMVTAM).

**BILL GAVIN  
NEW YORK**

*Is there anything on MARK III that reports on the Japanese stock market or the Japanese economy?*

Yes. A company named ODS in Tokyo has a product called Comline. There are 14 categories of information available to subscribers in areas such as computers, telecommunications, electronics, machinery & engineering, chemicals & materials, biotechnology & medicine, economics & finance, commodities, and automobiles.

It's a QUIK-COMM System service that uses the bulletin board feature. For more details, list a DY28 file named COMLI\*NE.



**EAST-FAX**  
8\*274-6517 QK: FAST

**LAVIE  
NEW JERSEY**

*What user's guides are available for C Language on MARK III Service?*

The OLOS number is 3200.20A, but most people who use the language also like to have the Prentice Hall book written by Kernighan and Ritchie as a reference. It's not available from OLOS but is available at book stores for \$28.00. In addition, you may want to make a copy of the on-line file TOOL:C.MEMO.

**BILL GAVIN  
NEW YORK**

*What is the status of access from Luxembourg?*

There's an MRC in Luxembourg in the capital city--which also is called Luxembourg. The activity there is handled by the Brussels (Belgium) office, which also does the billing.

Almost every week, one or two persons go to Luxembourg, because we have some large clients there. Access there is 300/1200 and 2400 baud.

Users cannot access the QUIK-COMM System through the network, however. They must go through the local PDN, which is called LUXPAC. (Thanks to Luce Cadranell in Brussels for this answer.)

## NETWORK ACCESS

**FRED LIU  
KOREA**

*What is the status on access from South Africa?*

List a DY28 file named SAX. It provides complete details about topics such as monthly costs, installation costs, equipment, QUIK-COMM usage, TSI, and the QUIK-COMM™ System Personal Computer Mailbox. The QUIK-COMM address for South Africa is SASO.

**DEBBIE PARKS  
ATLANTA**

*Who should be contacted for support in Taiwan, and what is the address?*

All requests for support in Taiwan should be directed to the QUIK-COMM System address VANGUARD to the attention of Juber.

Here's the complete mailing address: Dr. Tsung Tee Li, Director, Vanguard

Information Center, 602 Min-Chuann E. Rd. #552, Taipei, Taiwan, Republic of China.

**CLAUDE ARLEN  
LYON, FRANCE**

*I have a client who wants to use PC Mailbox and the QUIK-COMM System from Argentina. What arrangements must be made?*

First, have your client get in touch with Public Data Network Engineer Armando Parolari in Buenos Aires on (541) 49-0913. He is the representative for the Public Data Network that serves Argentina. He can provide information about prices and available speeds.

Have your user ask about leasing or buying a PC there in Argentina, as opposed to bringing one in from France.

You'll have to sell your client a copy of PC Mailbox to take to Argentina--it's not available for sale there. You may have to modify the sign-on procedure slightly to be sure it gets through the PDN into MARK III Service. The number used to reach MARK III Service from the PDN is contained in the DY28 file IRCINFO.

## QUIK-COMM

**LARRY GELLER  
JAPAN**

*One user uploads an ATTACH file via PC Mailbox. The other user wants to use FTU to download the file, because he isn't using PC Mailbox. But the given MARK III file name doesn't seem to be saved*

*Continued on next page*

## FASTFAX

Continued from previous page

**and can't even be described. What's happening?**

The reason is that use of the FTU feature on a free-standing basis is not permissible in GE Information Services' international network.

### ENRIQUE HERRERA MEXICO

**I have a client with a Telex who wants to send a message to my terminal and my QK11 address. Is it legal, and how is it done?**

Yes, it's legal to send from a Telex device to a QUIK-COMM System address. The client sends the message to Telex address 192803 (thus getting to TRT in the USA and the QK11 catalog). Then, the first line of the Telex message to you must contain QC:MXGM.

### RICH SARGEANT NETHERLANDS

**Is each address assigned a range of numbers for outgoing messages on the QUIK-COMM System? How big is the range?**

Part of the number is a range. The last three digits run from 000 to 999 and then start over again. The first four digits represent the address itself. A user can keep track of the outgoing messages sent by logging them according to the last three digits. The first four remain the same for the sending address.

### MARIT ROGNE NORWAY

**Is it possible to have a sub-administrator for a limited quantity of numbers within a QUIK-COMM System catalog?**

Yes, it's possible to have a sub-administrator. Here's the procedure.

Using ADM, the catalog chief administrator (CCA) sets up user number 700 (for example) as the sub-administrator for the range 700 to 750. The CCA gives 700 the power to NUM into all of these numbers 701 to 750. The CCA tells 700 what the password is for QUIKADMN\*\*\*. Now, 700 can run QUIKADMN\*\*\* and set up addresses for users in the 701-750 domain, who will be able to send messages to the entire catalog. Users are *not* restricted to addresses within this domain.

### TARYN ALDERTON HONG KONG

**Here are some questions about the QUIK-COMM System that I'd like to get answered. Please help.**

**Is Requeue a standard command, or does it require a specific set-up by the administrator?**

Yes, the administrator must execute the QUIK-ADMN\*\*\* option command to enable requeue for the catalog.

**What is the maximum size of an interactive message?**

The maximum size is 2500 lines, with 58 characters per line.

**What is the maximum size of a message sent by batch?**

The MARK III Service DENT limit is 830 records. **What is the maximum size of a PC Mailbox message?**

The maximum size is 8K on send and 10K on receive.

### JOHN HENNESSEY MILWAUKEE

**I have clients who want to write their QUIK-COMM System messages to a floppy disk and be able to retrieve and read them in an off-line mode 30 or 60 days later. How do the messages get written to a floppy disk?**

Currently, you can make a copy of a received PC Mailbox message.

Enter REVISE MESSAGE Mode in the In Basket and move the cursor to the body of the message; press Alt F7 to copy only the message body to a DOS file.

Version 3.0 of PC Mailbox will change the current RESERVED basket to an ARCHIVE basket, and you will be able to move entire messages to the ARCHIVE basket and then later move the messages out of the ARCHIVE basket onto a floppy or hard disk for local storage and retrieval.

## LAST CHANCE: SUMMER OF FITNESS FOR MDA

Don't forget: This year you can choose which month you want to participate--June, July, or August. So you still have one chance to run, swim, bicycle (moving or stationary), or fast-walk for MDA.

For the third year, GE Information Services is sponsoring MDA. The company will donate ten cents for every mile of program activity completed by the employee during the selected month.

Additionally, the company will pay the \$5 fee for the starter kit, which includes a T-shirt and mileage log.

For more information on the program, consult either the April or June issue of SPECTRUM (both include registration forms), or call MDA's Arlene Warmhold at 703-823-1115.

## AMERICA'S LOVE RUN



## WORTH NOTING

### GE AND RCA COMPLETE MERGER

On June 9, General Electric Company and RCA completed their merger, with GE acquiring RCA for \$6.4 billion in cash. The price included \$66.50 per share for RCA common stock, \$42.50 per share for RCA's \$3.65 preference stock, and \$40 per share for its \$3.50 preferred stock.

Jack Welch, GE Chairman and Chief Executive Officer, will serve as Chairman and Chief Executive Officer for the combined company, which will be headquartered in Fairfield, Connecticut.

RCA and NBC will become subsidiaries of GE. Robert A. Frederick will remain as President and Chief Executive Officer of RCA, and Grant Tinker will

continue as Chairman and Chief Executive Officer of NBC.

The US Department of Justice completed its review on May 21, and the Federal Communications Commission approved the transfer of NBC and RCA broadcast and communication licenses on June 5.

The Federal Communications Commission approval requires GE to sell within 18 months five NBC radio stations in New York City, Chicago, and Washington, D.C.--the cities in which NBC also has television stations. Under FCC rules, a new owner cannot own television and radio stations in the same markets.



### BOSSIDY ADDRESSES ELFUNS

Addressing the Cleveland chapter of the Elfun Society recently, Larry Bossidy (GE Company Vice Chairman and Executive Officer) considered GE's competitive position. Bossidy noted that "GE is now largely a high-technology manufacturing and services company.... We now have a powerful array of businesses with long-term prospects for growth in sales and income."

In today's business world, it is important to be "big...Siemens does \$16 billion a year in sales, Hitachi does \$18.5 billion, and Philips almost \$18 billion. Our size gives us the resources and the caliber of people to compete in this size game."

Bossidy illustrated his point by citing GE's turbine business. "This is one of the oldest businesses in the company. Now it's in its worst slump. But we know that the turbine market will return in the 1990s or sooner. It's precisely our financial strength...our bigness...that will permit us to stay the course, keep our technology fresh and our factories open during the lean years. Small companies, entrepreneurial or not, simply cannot do that."

Bossidy pointed out that although each individual GE business may be unique in some respects, "it is

important that every business share a passion for customer satisfaction as a prime guarantor of employment...and the ultimate source of all wages and work.

"It is not important that any common structure govern the day-to-day operation of our business, with one indispensable exception...honesty when dealing with the government and when dealing with each other." Bossidy concluded, "We're convinced that we have the businesses, the resources, the people, and the vision to make this company what we all know it can be...the most competitive enterprise on Earth."

### GE EXECUTIVE TAKES IRI HELM

Roland Schmitt, GE Senior Vice President in charge of the Corporate Research and Development Center, has been elected to a one-year term as president of the Industrial Research Institute (IRI).

IRI is an association of 265 leading industrial companies with a common interest in research and development. IRI's mission is to enhance the effectiveness of industrial research and to generate understanding and cooperation among the academic, governmental, and industrial research communities.

*Continued on next page*

## WORTH NOTING

*Continued from previous page*

### GE ENGINES BUILDS AIR FORCE ONE ENGINES

GE engines have been selected to power two Air Force One planes recently ordered by the US government for presidential use.

Each of the Boeing 747-200Bs will have four GE CF6-80C2B1 engines. Developed in the Energy Efficient Engine program that GE undertook with the National Aeronautics and Space Administration, the engine is being used by four airlines and has been ordered by six other customers.

"We're extremely pleased to have been selected," said Brian Rowe, head of GE's Aircraft Engine Business Group. "It is fitting that the presidential aircraft should be powered by engines of the highest quality and reliability that incorporate the most advanced technology the industry has to offer."

### GE MEDICAL SYSTEMS STUDIES MYSTERIES OF PLANT GROWTH

Scientists from GE's Medical Systems Group are working closely with the US Department of Agriculture in a unique application of magnetic resonance (MR) scanner

technology to the study of the structure and functioning of living plant roots.

Using a scanner very similar to MSG's Signa system at GE's Research and Development Center in Schenectady, the researchers can "see through" a pot and soil, observing root reactions without disturbing them.

Under the magnetic field's influence, the radio signals "excite" selected plant atoms, causing them to resonate. The resonance signals are picked up by another antenna and transmitted to a special computer, which interprets the signals and constructs a picture of the plant being imaged (actually a computer-screen map showing the location and concentration of excited atoms).

MR technology originally was developed as a complement or substitute for x-rays and CAT (computer axial tomography) scans. Because MR imaging has no known effect on plants, it can be repeated as often as necessary to monitor growth and development, opening the door to more accurate studies of plant responses to light, carbon dioxide levels, and nutrients.

[Thanks to MSG WORLD for this item.]

## MILESTONES

Congratulations to the following employees, who celebrated service anniversaries in June.

### 35 years

*Rockville*  
**Robert L. Johnson**

### 25 years

*Atlanta*  
**Harvey Henson**  
*Rockville*  
**Jay G. Alderson**

### 20 years

*Rockville*  
**David G. Bruce**  
**Larry A. Capriotti**  
**Charles W. Hicklin**  
**Ron McKinney**

### 15 years

*Rockville*  
**James C. Macioce**  
**Nancy Rizzi**

### 10 years

*Atlanta*  
**Frederick G. Weprich**  
*Chicago*  
**Thomas H. Groseth**  
*Rockville*  
**Marilyn Botkin**  
**Brenda Edwards**  
**Ashok Mannan**  
**B. J. Norris**  
**Kathryn Stephens**  
*Saddle Brook*  
**Gary Cannon, Jr.**  
**Bryan Inderrieden**  
*San Francisco*  
**Laurette A. Kaufman**

### 5 years

*Arlington*  
**Donna R. Wade**

## EDITOR'S NOTES

### GEM

Alec Absalom sent along several important errata to last month's GEM cover story. First, John Utne (Oslo) took the lead on the construction of data collection interfaces to four different systems operated by the GEM lines--one of the three tasks required for the first phase of the GEM contract. Second, Jan Yngfors is one of the GEM team consultants. Third, GEM recently decided to use Software International's General Ledger system for financial accounting.

### General Accounting and Tax Office

For those of you who wondered how to match the employees in last month's Parting Shot picture with the names in the article, left to right in the back row were Dick Gray, Charles Locke, Art Corbin, and Nancy Rizzi, and left to right in the front row were Liz Smith, Linda Morris, Jim O'Brien, and Max Harris. Not pictured was Russ Long.

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*Los Angeles*  
**Vikki J. Schanz**  
**Homa Taraji**  
*Rockville*  
**Craig S. Fetterolf**  
**Kenneth R. Ford**  
**John E. Lancaster**  
**John F. Stetson**  
**Doree Thorpe**

## S&SP

The following table summarizes the prices for GE Stock, Mutual Fund, and Holding Period Interest

Fund used in the Savings and Security Program to credit participants' accounts. The Long Term Interest

Fund price for the last day of the month is also shown, as well as year-to-date annual income rates for both the HP and LT Funds.

Month	Stock Price	Mutual Fund Price	Holding Period Fund				Long Term Fund			
			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%	

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

shipments. Such improvements will reduce both the number and dollar volume of open export receivables for exporters.

"By reducing open receivables, customers using this service will not only improve cash flow but also create substantial interest income opportunities as well," Castellano notes.

ATP's pilot project employed ATP and TRADE\*EXPRESS to service a major West Coast cotton exporter, its freight forwarder, and its ocean carrier. Documents were created and transmitted via TRADE\*EXPRESS; FNBC added its financial intermediation; and a series of letter-of-credit and collection payments were made using ATP.

In most cases, the cotton exporter received payment within 24 hours, in marked contrast to the seven to ten days previously required to execute the payment cycle via express courier or mail service.

GE Information Services, SITPRO, and FNBC are all very optimistic about the commercial potential of these products, which address crucial international business concerns.

Continued from page 8

accommodate larger user loads with better response time and improved reliability. Portions of this project already have been deployed.

Other productivity programs that address cost and quality concerns and are scheduled for completion in 1986 include: extensions to capabilities for processor and storage governing of catalogs and group catalogs; and features--such as faster system reboots, file system improvements that protect against busy or hot files, and storage devices--that will lead to 24x7 availability.

These technological initiatives addressing telecommunications and networking, responsiveness to clients, and productivity improvements illustrate MARK III's flexibility to develop unique, customized solutions to clients' telecommunications requirements.

[Contributors: Roger Dyer, Tom Popdan, and John Watson]

Continued from page 16

Anthony J. Castellano (Vice President, FNBC) explains, "By using ATP, customers can present documents to the bank four to 12 days sooner--in most cases--than they could by using existing means. Additionally, for credits that are reimbursable overseas, FNBC can save an additional eight to 14 days by electronically transmitting documents to its international offices for presentation to the local paying bank."

Thus, ATP can accelerate payments by four to 18 days on routine shipments and by as much as 30 days on some historically problematic

## ELFUN SOFTBALL TOURNAMENT A BIG HIT

On a sunny--and ultimately hot--Saturday, over 300 employees from GE Information Services and other D.C.-area GE components joined their families, friends, and roughly 100 players from non-GE teams to participate in the Elfun Society's double-elimination softball tournament. A volunteer organization of GE employees, the Elfun Society took its cue from Walt Williams, who proposed a softball tournament for Elfun to raise funds for charity while members have a good time.



The Elfun Society held its third annual Elfun Charity Softball Tournament at Gaithersburg Junior High School on June 7. The tournament raised \$2,400 to send children from the National Cancer Institute's Pediatric Oncology Branch to Camp Fantastic, a unique summer camp run by Special Love, Inc.

Above, Walt Williams and Jack Hanson offer their advice to Jeff Quelett--who attended Camp Fantastic last year--before he throws out the first ball to officially start the tournament.

This year's tournament, the largest to date, featured 16 teams in two divisions--one for GE teams (organized specifically for the tournament) and one for outside teams (usually league teams that play on a regular basis). GE Information Services' league team, headed by Robert Vaughn, won the outside team division and went on to play the winner of the GE division, Larry Signora's GE Information Services team. In a seven-inning battle, Signora's team emerged with a 14-4 victory and the overall championship. The second place team in the GE division, headed by Dan Miller, included Walt Williams, his sons-in-law, and specially recruited Financial Management Program players. [There is, of course, no truth to the rumor that some of these players were ringers.]

[Contributors: Charlie Harp and Leslie Vogel]