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SPECTRUM

FOR THE EMPLOYEES OF GE INFORMATION SERVICES

MARK III® SERVICE GAINS COMPETITIVE EDGE



New Capabilities Make MARK III®
the PC User's Gateway to the World

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GE Opens In New Zealand

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International Teamwork Breaks New Ground

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EAST·FAX

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GE Information Services

MARK III® GAINS COMPETITIVE EDGE

MARK III, GE Information Services sleeping giant, is up and about and flexing its muscles. Breakthrough communication capabilities have been added to this flagship service, so that today it emerges as the PC user's gateway to the world.

This breakthrough strategically positions GE Information Services in applications integration, a direction that many companies, particularly those with international operations, are recognizing as the way to remain competitive in a global market.

"Continental Grain is a classic example of our new capabilities," says Roger Dyer, MARK III Client Systems. "Continental Grain needed an international reach in electronic mail but didn't want to displace its in-house system. We were able to develop a smooth interface between Continental Grain's SYSM messaging system operating on an IBM host and our QUIK-COMM service on MARK III. In-house personnel continue to use the SYSM system; those outside use QUIK-COMM. The program acts as a mail handler, sorting and routing mail to the appropriate system in a way that is transparent to the end user. Without the new capabilities we could not have provided this solution."

Three key elements make MARK III the powerful performer it is today—MARK*NET technology,

enabling the network to be attached to a range of host systems; MARK III's Foreground Communications Manager (FCM), the vehicle for new types of sessions, such as multistream and multiterminal; and the FCMF77 package, a "tool kit" to put these capabilities in the hands of applications developers.

This combination of capabilities enables MARK III to provide:

- Host Connectivity – A MARK III program can reach out to a client's host system connected to the network



Craig Fetterolf demonstrates the ease with which a user can access all his information needs in a single session, using just one terminal and viewing data on a multi-windowed screen.

with no modification of the client's hardware or software applications.

- **Inter-Program Communication** – Programs can talk to other programs—across systems, across clusters, across supercenters. Worldwide processing becomes a reality.

- **Single User Interface** – Using these capabilities, MARK III can act as a “smart switch” to connect one user—using a PC-based workstation—to multiple host systems and present the user with a single, unified, “seamless” interface.

Technological Breakthrough

The evolution of these capabilities and, more significantly, their packaging into extremely easy-to-use FORTRAN77 subroutines gives GE Information Services a capability that is unique in the marketplace today. Programmers can now develop customized client applications that provide connectivity to virtually any client host and any application on that host—no matter what variety of hardware and software and however geographically dispersed.

“If a system can talk to the outside world, we can talk to it,” explains Norm Harvey, MARK III Client Applications. “Up until now computer systems have been based on the idea that the end user will call them. They are essentially passive. We’ve reversed that. We have added capabilities to our operating system and developed application software that enable programs running on MARK III to issue instructions to our network and establish a communication path between MARK III and any address within that network. In essence, we have built a switch that can make outgoing contacts, thereby becoming a conduit to all a client’s information needs.”

With these new capabilities, SDC organizations are off and running, developing and delivering application solutions that not only meet our clients’ requirements but also give the company a real competitive edge.

“Norm Harvey and his team have created an amazing new tool for application designers,” says Ad McGarrity, Project Manager, Atlanta. “It is certainly destined to make many applications involving data collection economically feasible that would not otherwise have been so.”

This new technology can also be used to expand the capabilities of existing applications. The Mechanized Assignment and Record Keeping (MARK) system, developed for GTE Florida, is a good example. To meet the client’s need for growth in both functionality and usage of this application, FCMF77 is being used to provide interprogram communication and to allow accesses to be controlled by custom “server” applications. These servers will enable simultaneous access to files rather than on the current file contention basis.

Another key upgrade in progress is an application being developed for EuroClear, the trade confirmation arm of Morgan Bank. In this application FCMF77 is being used to move the interconnection with EuroClear’s in-house IBM system from batch



Craig Fetterolf makes a presentation of the new capabilities of MARK III in the Executive Briefing Center in Rockville. Clients who have visited the Center recently to see the demonstration include Kodak, Levi Strauss, Haggar Apparel, and Honeywell.

Norm Harvey: 35 Dynamic Years With GE

Norm Harvey came to GE in 1952, a young electrical engineer out of Cornell University, to work at the Advanced Electrical Center in Ithaca, New York, and his career took an early focus from which it never really strayed.

While at Ithaca, he said to himself, "There's got to be a way to let engineers talk to computers," and he helped find a way. Nearly thirty-five years later, he looked at the complex operating system of MARK III and said, "There's got to be a way to harness that power," and he set out to find one. With the help of people like John Watson, who understands how the complex system works, he learned how to talk to the Communication Manager, the front end of MARK III, and developed FORTRAN 77 routines that help programmers write applications that interconnect clients' hardware and software to the MARK III network.

In the 35 years in between Norm has always been motivated to find ways to do things



Norm Harvey holds a copy of FCMF77 System Routines, the reference manual he developed to help FORTRAN77 programmers develop customized applications for clients.

better, often searching for answers before many knew the question. In the early 1960s he recognized the potential of time sharing and helped lead the company into that business. In the early 1970s, while manager of applications, Norm directed application development away from engineering oriented time sharing toward broader business

oriented products. In the mid 1970s, as manager of Strategy Development, he helped position the company in the international market. And in the early 1980s he helped develop an important set of advanced products—among them Information Manager, CB Menu (now called GENie), and Micro Integration—that contributed to the company's profitability during that period.

Today Norm Harvey manages MARK III Client Applications, finding solutions to major client application needs—and developing tools that enable others within the company to benefit from his expertise.

"Norm has a great technical imagination," says Bob Hench, who heads the MARK III group, "and he has a kind of sixth sense about what customers want and need. For as long as I've known him—and that goes back a lot of years—he has been finding innovative, cost-effective ways to harness technologies to respond to client needs. That's a rare quality." ▲

transmission—which requires the bank to shut down the computer several times daily while it gathers data from individual mailboxes—to an on-line process that will enable continuous real-time transmission of data.

"The secret of FCMF77 is its simple elegance," says Craig Fetterolf, MARK III Client Systems. "It takes the simplest common denominator, the simplest form of communication, a TTY user interface, which every system has to have, and makes FCM act as if it were just another user. FCMF77 removes a whole layer of

technical translation so that programmers like me can write an application in days that a year ago would have taken weeks or even months.

"When clients come to the Executive Briefing Center for a demonstration of these capabilities, they watch in utter disbelief," he adds. "I log on to the supercenter in Ohio, call Amstelveen, talk to a PC here in Rockville, connect to a VAX or IBM system—all with no visible difference in response—in a single session from a single terminal device."

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