Epsilon Paves the Way to World-class Marketing

Christopher Geiger is helping companies down the path of *World-class Marketing*

Christopher Geiger
Vice President, Marketing

There are two questions every customer-focused CEO, CFO and marketing executive should ask. What does a world-class marketing organization look like? And what is the information and technology infrastructure to support that vision?

Today, though examples vary, world-class marketers are defined by three basic criteria: they view customer information as an asset for competitive advantage; they use a central data warehouse to assess the value of customer relationships; and they employ personalized programs to achieve their marketing goals.

World-class marketers also continuously assimilate customer information from touch points, such as customer service, telemarketing, billing and the point of sale. They quantify the costs of acquiring and retaining individual customers as well as each customer's value and the major factors influencing each customer's decisions. World-class marketers know each customer's place in the purchase lifecycle and employ recognition programs to sustain or upgrade

each important relationship. They generate one-to-one messages in immediate response to meaningful customer behavior. They also deliver relevant communications promoting goods and services based on individuals' and households' recent and historical spending, anniversaries, birthdays and other key events.

A New Paradigm Comes of Age

Applying the precision of just-in-time manufacturing in marketing, world-class marketers stand to gain huge savings, revenue increases and investment returns from dramatically streamlined, more finely targeted communications.

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First, however, companies must make a paradigm shift from what Epsilon executive vice president, John E. Groman, calls the "the 'we make it, you take it' approach of the 1970s and 1980s to a 'you want it, we have it' 1990s customer focus." Vying in a slow-growth global economy for finite numbers of customers, companies must recognize the increasing value of individuals and extend their resources to foster personalized relationships. They must realize the business advantages of using parallel databases and other advanced technologies to capture and disperse customer information in one or two days compared to a month. "Above all," says Groman, "companies today must be willing to invest in a 'zero defects' marketing strategy similar in efficiency to the downsized work forces and manufacturing models of the 1980s."

The Reengineering Challenge

Once committed to world-class marketing, companies face a five year reengineering challenge that can impact almost every area of their operations. Driven by the selection and implementation of a scalable corporate data warehouse and analytic tools, world-class marketing requires companies to restructure the way they gather and use customer information.

Marketing organizations must be revamped to rapidly deliver relevant messages to individual customers. Data previously isolated in departments must be shared and integrated for marketing use. The economics of customer relationships must be clear and available for every product line and market segment. Decision rules need to be in force so the company can generate behavior-based messages in response to customer decisions. Production facilities also must be equipped to quickly prepare communications for distribution.

As the first company to apply parallel processing to marketing, Epsilon has helped corporations like American Express and BMG Direct achieve world-class standards. With this experience in mind, Epsilon now segments world-class marketing into the following five components:

- Organization
- Technology
- Information
- Communications
- Economics

John E. Groman, Epsilon Executive Vice President

Organization

One of the first and most crucial tenets of world-class marketing is organizational change. Typically comprised of departments which do their own marketing and share little, if any, information, companies must restructure their marketing resources to focus cooperatively on the customer.

Mainframe data originating in one department should be made accessible to departments across the corporation, enabling each to share the wealth of information the company has acquired. Communications should also be shared with related departments to avoid duplicate mailings and ensure that only relevant messages are sent. Customer service must automatically pass on customer complaints to product managers. Accounting must apprise advertising of a customer billing problem, and telemarketing must let sales know when a customer is at risk to attrite. In short, all transactional systems must feed into a central data repository so the corporation's memory always remains intact.

Led by a champion designated to spearhead the transformation, companies must be willing to rebuild or scrap any unproductive entity. Departments must be evaluated for their profitability and modified, merged or eliminated to strengthen customer relationships. Positions within departments should receive similar scrutiny to determine if they will be realigned or jettisoned. Finally, new departments and positions should be analyzed for their ability to improve customer marketing and lower costs.

Businesses with product or advertising executives making their marketing decisions, for instance, may transfer this authority to a *customer relationship* department. Focused on develop-

ing customer relationships, the customer relationship department manages customers in predefined market segments. Customer relationship managers typically evaluate existing customer communications to each segment, purge redundant messages and work with product, advertising and marketing managers to develop personalized programs.

Innovative and proactive customer relationship departments are a strategic resource able to facilitate corporate information sharing and unify marketing efforts. They can help dramatically lower communications costs and increase profitability from the new programs they create.

Technology

World-class marketing is a synergy of technology—the centerpiece of which is a central open system data repository able to capture and process corporate-wide data. Built from relevant customer-level information originating on departmental mainframes, the data warehouse must rapidly mine through billions of records to process marketing queries. It also must be linked to mainframes so that query results can be shared with departments, and departments using mainframes can continuously update the database as customer relationships evolve.

In addition to speed, data warehouses must be reliable and scalable to accommodate corporate growth—capabilities which Epsilon has found reside exclusively in symmetric multi-processors (SMPs) and parallel processors. Unique in their power and unlimited processing capacity, SMPs and parallel processors running relational database management systems can resolve marketing questions up to 100-times faster

> 66 Above all, companies today must be willing to invest in a 'zero defects' marketing strategy similar in efficiency to the downsized work forces and manufacturing models of the 1980s. 99

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than single-processor systems. They require no special coding to complete applications and function transparently to users via interactive access tools, such as Epsilon's MarketWise™.

MarketWise™ allows users to query the data warehouse the way they think and work using English language queries. The client server system saves data as a found set or subset on a middleware server for access on a PC. Expandable to thousands of users, MarketWise™ allows marketers to swiftly transform query results into presentation formats and quickly saves data on common file formats.

Post-processing solutions, such as data visualization and advanced neural networks, also play a critical role in world-class marketing. Able to profile customers most likely to respond to product launches, promotion and retention programs, these tools offer companies unprecedented opportunities to increase revenues and savings. Data visualization can display answers to complex marketing questions in a single graphic capturing thousands of variables. One telecommunications market leader using a four-dimensional chart recently discovered a previously ignored high-value market segment and is now developing communications programs to tap into it.

Advanced neural networks use non-linear adaptive models to rank individual customers and prospects for specific marketing programs and evaluate the profitability of sales and marketing efforts. In one case, Epsilon used an advanced neural network to score candidates most likely to join a prominent fund-raising organization. The non-profit company screened out 30 percent of potential prospects, saving itself thousands of dollars in mailing costs and still sustained its acquisition rate.

World-class marketers are also starting to add expert systems into the technology mix. Ideal for implementing behavior-based programs, expert systems can establish business rules that trigger automatic responses to customer actions. Imagine a credit card issuer sending a customer discount certificates for London restaurants two days after that customer has reserved a flight to London. The value of expert systems is clear. They can generate communications to customers exhibiting attrition-type behavior, enabling companies to apply resources to preserve customer loyalty.

Companies moving to world-class marketing should also employ production equipment that can rapidly output individualized communications. High speed printers running applications with thousands of different variables should be linked to parallel databases or feeder systems so all communications can move rapidly from conception to distribution.

Information

Customer data is the lifeblood of world-class marketing and must be distributed across the corporation as business objectives require. Traditionally sequestered in departmental mainframes and organized by product line, information must be reconfigured on a central data warehouse and addressed by customer—a complex task Epsilon often performs for clients.

Once in place, the data repository acts as a reservoir of information for all departments that transact with customers. The database should determine who is entitled to what data and can provide unparalleled applications. Product managers, for instance, can ascertain the number of sales meetings with each customer, who made the calls, and what samples were left behind. The manager may also rapidly assess the cost of each sales call and the expense of retaining that customer based on the customer's recent and historical purchases. The manager may then take specific data about that customer and develop a creative, more economical plan to satisfy the customer's needs.

With complete customer information available at each transactional level on users' PCs, companies have the new-found ability to turn "incidents" into opportunities. One leading software company turned its customer service organization into a profit center by promoting its products when customers call in with questions or problems. Armed with complete purchase histories and service records, customer service representatives first respond to the customer's concern. They then introduce the product explaining how it can improve their productivity based on their knowledge of the customer's applications.

The corporate data warehouse should include demographic and psychographic data from third-party sources such as Donnelly and MetroMail. This information, coupled with transactional data, is invaluable for product launches and can complete the picture of every prospect and customer, enabling companies to save thousands of dollars in communications costs.

Communications

World-class marketers have the vision and speed to create behavior-based communications that "reflect" individual customers as they see themselves. Developed using parallel processors and supporting technologies, such communications can be completed 75 to 100-times faster than with mainframe systems. They range from new product and retention programs to simple thank you letters and gift ideas. They can be delivered through a wide range of media, including catalogues, direct mail, and telemarketing, and will eventually be presented interactively on computers and television. Most importantly, they allow marketers to beat their competition to the punch and can provide an unprecedented, cost-effective advantage.

One health insurer, wanting to itemize claims cost for individual customers, generated a report for $30 in 10 minutes that formerly would have taken up to three months to complete and cost $6,000. The report not only helped the insurer retain customers, it also won the company several new accounts. American Express, which provides cardmembers with year-to-date spending statistics, suggestions to improve card usage and discount certificates, is achieving similar success with its quarterly newsletter—On Your Account.

In effect at every touch point, world-class marketing communications allow companies to solidify customer relationships at every interaction. American Express, for example, distributes discount certificates on monthly invoices to UK cardmembers based on customer purchases. Dayton Hudson's *Regards* program provides select customers with free coffee and coat-check, special holiday shopping hours and dedicated in-store staff to attend to members' needs. Dayton Hudson has already gained a 10 to 1 return on investment. BMG, the leading CD mail order club, will soon be tailoring catalogues to individual customers and should achieve comparable results.

Economics

World-class marketers' improved customer modeling and communications capability can bring a major boost on companies' bottom lines despite the $250,000 to $5 million price tag of an SMP or parallel data repository. Hughes Aircraft's Aerospace and Defense Sector, for instance, expects to recover development costs of its data repository within one year, according

Epsilon Delivers Customer-Focused Support of MarketWise™

Laura Lem heads the Epsilon team dedicated to MarketWise™

Laura Lem
Director, Technical Services

Epsilon is employing a customized support program to optimize the installation, training and customer service of its new open system data access tool—MarketWise™. Designed to streamline marketers' analyses of critical data, MarketWise™ uses a three-tier architecture that captures data from any relational, parallel or mainframe database platform and saves extracts as a "found set" on a UNIX-based server for access on a PC.

Epsilon's new customer-focused support program, engineered and implemented by the Research and Development staff that created

MarketWise™, is geared to satisfy the marketing and productivity needs of individual corporate customers.

Installation begins with a comprehensive plan detailing marketers' hardware requirements based on their in-house database configuration or their database as maintained by Epsilon and the number of expected users. Once implementation begins, Epsilon's database administrators construct connection files from the database to MarketWise, enabling users to transparently access their databases using the tool's English Language Query Builder or Visual Query Builder.

Epsilon's application training program provides database managers, systems administrators and office support

staff with the skill to use MarketWise™ to its full potential within their organizations. Conducted at customer sites or at Epsilon's new PC laboratory in Burlington, Massachusetts, the roughly three-day course includes basic training as well as full instruction on such advanced features as Report Writer—a productivity tool that allows marketers to customize report templates and presentation quality communications.

Epsilon's customer support of MarketWise™ is among the most proactive in the corporation's 25-year history. Designed with continuous improvement in mind, the MarketWise™ program allows the system to provide the ultimate decision support through close personal contact with customers.

To start, MarketWise™ users can count on a support team comprised of an account executive, technical counselor and account manager dedicated to their operation and intimately familiar with the reports they run on a monthly, weekly or daily basis. The team also has the knowledge to maintain connection files, PC Windows, memory management and modem connections.

In addition to PC-based remote service, Epsilon provides toll-free telephone hotline support, an Internet service number and fax support for international customers. Epsilon also has introduced its first ever User Advocate—a dedicated support person who works regularly with customers to perfect their applications and solicits their recommendations for improving MarketWise™ in future product enhancements and releases.

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to an October 1994 article in *Open Computing*. Business data once assembled by nine full-time employees is now available on users' desktops. The Sector cut paper financial reports from 480,000 to 150,000 pages per month. General Electric Co., *Open Computing* reports, anticipates a 3 to 1 payback on its data warehouse based on 100 decision-makers' use of a prototype.

Better organized and more focused, world-class marketers can expect their biggest savings in direct marketing. A company spending $350,000 on a mailing to 275,000 people at $1.25 per piece may rapidly discover that only 20,000 recipients are prospects and save $318,750 before a single envelope goes out the door. By tracking the

quantity and outcome of marketing programs, the same company may also incur significant savings by eliminating specific customers from the program or scrapping the program altogether if its value is too low. Marketing budgets could conceivably be cut in half without any negative impact on revenues, while new programs developed using the data repository could add millions to the corporate treasury.

Like a traffic cop directing information across the enterprise, data repositories also may be used to eliminate costly—often obsolete—computer systems. A company using 15 databases to communicate customer information may only need 5 systems, allowing marketers to incur enormous savings and productivity.

The Future

World-class marketers must continuously respond to ever changing technology advances and customer lifestyles. With the information highway winding its way across the world, companies must now plan for a future when children reared on the Internet and Nintendo become their highest valued customers.

Striving to secure their market-share, marketers must prepare for when individualized product catalogues will be sent electronically to customer households and when interactive multimedia will deliver personalized marketing information to PCs. The day may ultimately come when 1 to 1 advertisements will be delivered via cable and satellite TV.

With yesterday's fantasies becoming today's realities, world-class marketers must not only look toward the horizon, they must anticipate it and respond to it even before it arrives.

Epsilon Delivers Mobile Computing to Healthcare Marketers
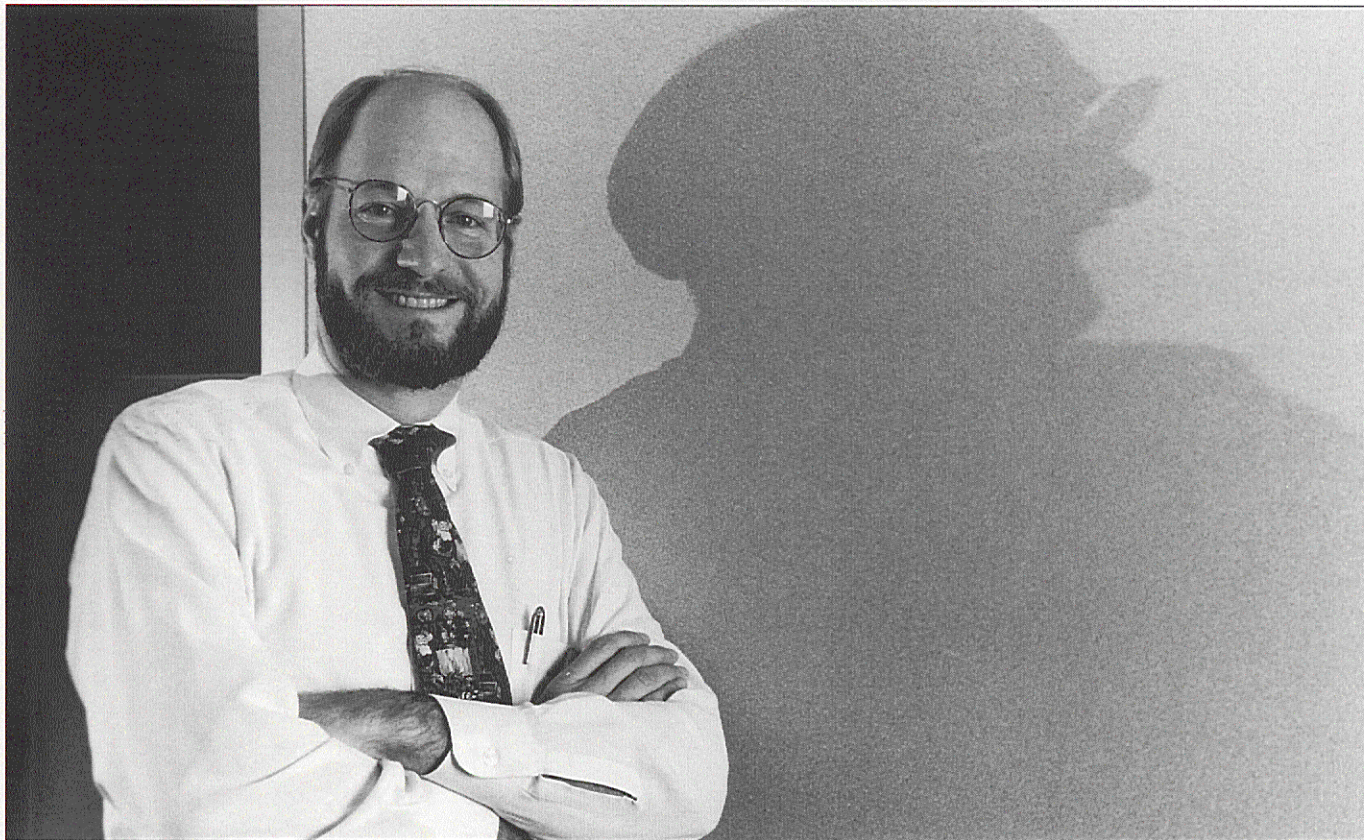
Jon Macomber tailors Epsilon's mobile computing solution to the individual needs of healthcare marketers

Jon Macomber
Director, Strategic Technical Services

Epsilon is now providing health care marketers with a robust mobile computing system enabling sales professionals to dramatically improve their productivity. Geared for medical supply distributors, as well as pharmaceutical distributors, the new electronic sales management system performs everything from appointment scheduling to sample inventory control. The system also delivers customer profiles and product presentations, allowing users to maximize their selling time and develop more effective marketing strategies within their territories.

An electronic signature capture feature permits licensed practitioners to authorize sample and product orders—often required by law—directly on the notepad screen, eliminating the need for a commonly-used three-part paper form. Users simply access the appropriate pop-up order window, and the practitioner signs the electronic sample or product order with a pen. The system can output a receipt to a printer or the practitioner's fax machine and will automatically send transaction data via a wireless modem or a wired network if in batch mode. All transmitted information is collected at a central database for processing and distribution. Sample and product order data is electronically archived should an audit be required.

Able to access health care firms' largest databases, the system's intuitive interface provides the sales force and marketers with updated information for targeting and evaluating sales activities as well as tracking product orders and sample distribution. This historical information, stored in the system's Customer Information Management module, allows sales professionals to more effectively track relationships with large numbers of customers and identify the best prospects for new promotions and product launches. The system's Sales & Marketing module provides promotional materials in text and graphical formats. Designed to enhance sales presentations, the module is ideally suited to fast-paced hospital and office environments and can be used effectively even as physicians are walking briskly en route to their next patient.

Customized to suit healthcare companies' business objectives, Epsilon builds systems based on specific customers needs. The firm also provides complete user training and provides field support on a stand-alone basis or as part of a larger contract for companies using the wide range of Epsilon solutions.

In its most recent application this September for F. D. Titus & Son, Inc., a leading California-based pharmaceutical and medical supply distributor, Epsilon developed an Order Management Module enabling sales representatives to access and send orders for more than 15,000 catalogue products to their distribution warehouses for 24-hour shipping. The system also maintains a Customer Order Guide, providing Titus' sales professionals with complete order histories, along with several other customer management modules designed to improve the firm's competitive position, productivity and marketshare.

Epsilon Launches Strategic Partnership with IBM
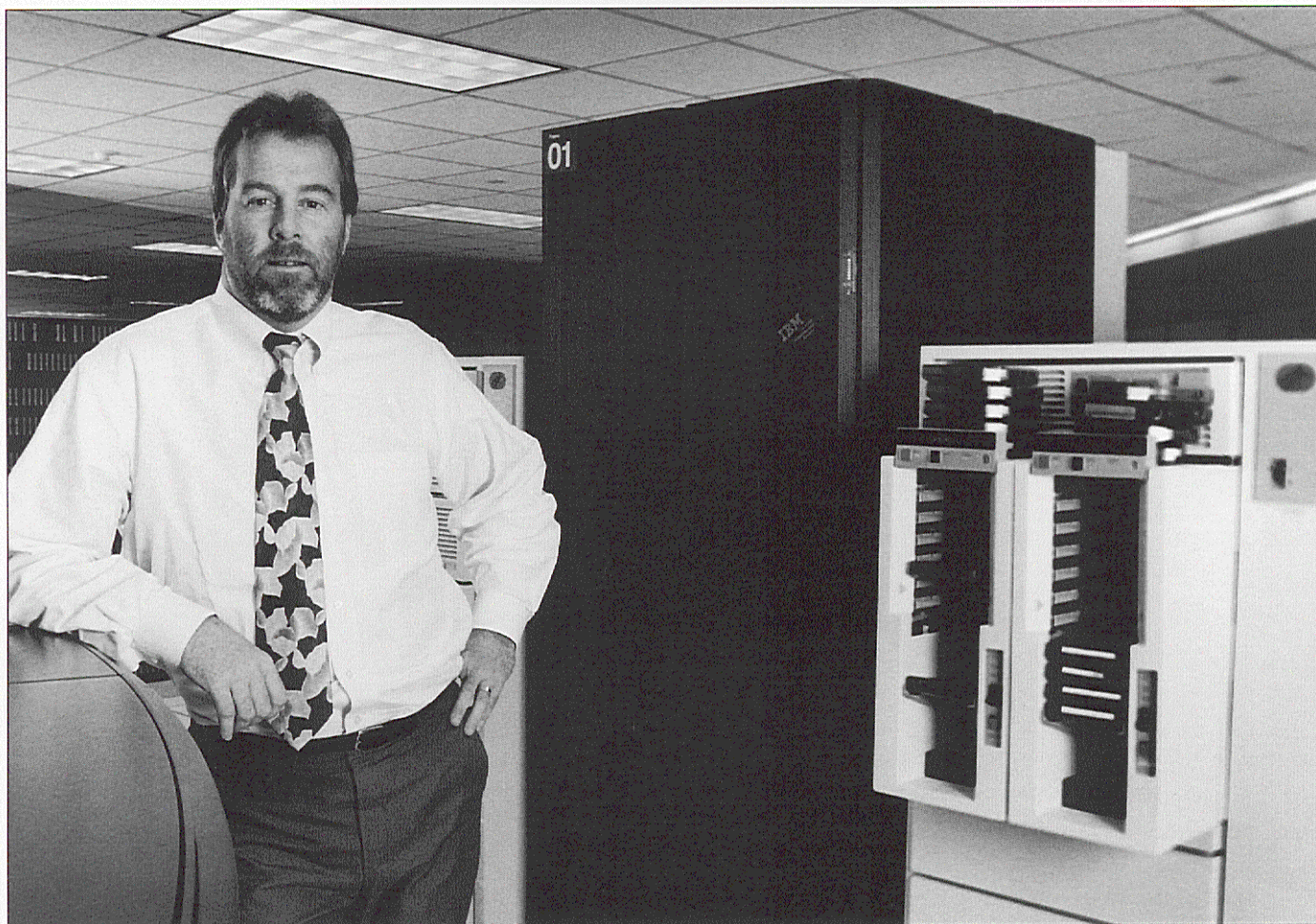
Tim O'Leary orchestrated Epsilon's strategic partnership with IBM

Tim O'Leary
Vice President
High Performance Computing

Epsilon and IBM have formed a strategic partnership designed to advance each others' business in the rapidly growing high performance computing marketplace.

Under the agreement, Epsilon and IBM will unite their complementary resources to deliver parallel marketing solutions to customers. IBM, makers of the industry-leading SP2 parallel processor, DB2/6000 Parallel Edition database and RS/6000 workstation, will support Epsilon's implementation of parallel systems. Epsilon will apply its unique expertise in parallel technologies to help IBM build marketing databases and introduce analytic tools, such as data visualization, neural networks and its premier data access tool—MarketWise™.

"Epsilon has a tremendous breadth of experience and sophistication in parallel processing," said Carolyn Martin, an Enterprise Marketing Specialist with IBM. "They have an in-depth understanding of commercially available database architectures and are uniquely positioned to articulate the benefits of our parallel hardware and software solutions."

Formalized in June, 1994, the Epsilon/IBM partnership emanated from a joint collaboration in 1993 for BMG Direct—a leading CD, tape and mail order club. BMG wanted a scalable parallel database to personalize mailings, reduce marketing costs, accelerate communications and accommodate its anticipated growth. Epsilon, after evaluating the market, selected the SP2 and DB2 6000/parallel edition for their high performance and economy—which paved the way for the new partnership.

Slated for completion this year, BMG's new database will process queries within hours or minutes that previously took weeks. IBM and Epsilon are working with several leading marketers interested in implementing similar solutions for themselves.

"Epsilon inspires the same confidence in us that they do for our customers," concluded Martin. "We see them as a valuable service provider that can help us make the most of our high performance systems in the marketplace, and we're delighted to be working with them."

Advanced Laser Printing Completes the Parallel Process for Marketers

Jim Hughes
Manager, Print Operations

Epsilon is now using an array of Siemens high-speed laser printers and an innovative quality control system to rapidly produce communication programs developed on parallel databases.

Linked to mainframes connected to parallel platforms and able to run magnetic tape, Epsilon's Light Emitting Diode (LED) duplex systems can print personalized messages at speeds of up to 300 pages per minute. The printers reproduce graphics, logos, illustrations dynamically targeted to specific members donors, subscribers and customers via parallel or other databases. "Print Vision," the on-line quality control system Epsilon invented in 1993, automatically monitors print runs and identifies trouble sources ensuring maximum speed.

Able to keep pace with marketers' growing needs to accelerate mailings and control costs, Epsilon operates the world's largest LED twin printing center, using both fanfold and roll-fed paper stocks to swiftly and cost-effectively complete customer projects. Twin printing rapidly duplexes communications using two adjacent printers instead of a single printer. The first printer prints side one of the document and feeds it to the second printer, which finishes the job.

Fanfold printers are used most on small to mid-sized "box-to-box" runs that utilize standard paper sizes. Using roll-fed paper, a single or duplex printer can print one roll or up to five miles of paper in eight to 10 hours. Roll-fed

Jim Hughes manages the world's largest LED twin printing operation

printers require minimal operator involvement and are ideally suited for long runs where optimum speed and efficiency is critical. They also allow Epsilon to print all the elements of a personalized newsletter, catalogue or survey on a single page that can later be cut and folded for distribution, providing marketers with significantly reduced production costs.

Operating 24 hours a day, 7 days a week, Epsilon's print facility can produce up to 600 million communications per year. The systems print on paper stock, ranging from glossy coated sheets to hefty tag and card stocks. The printers are networked to an MVS (IBM) operating system at Epsilon and can be linked via T1 lines to customer sites for the fastest possible response to marketers' needs.

Broad-based Expertise

A longtime supplier to database marketers such as Readers Digest and the Disabled American Veterans, Epsilon also provides the printing services for American Express' *On Your Account* program – a landmark quarterly publication distributed to thousands of individual Cardmembers. Originating on a parallel processor, On Your Account data is fed directly from a mainframe to an LED duplex printer, which personalizes each publication to the targeted Cardmember recipient.

Despite the enormity of the task, Epsilon completes the job within two business days, enabling American Express to deliver *On Your Account* on time and on budget to its customers.

Upcoming Articles

- **Customer Loyalty Programs for Major Retailers Unveiled**
- **Initial Benchmarks on the IBM SP$_2$ Platform**
- **Data Visualization Update**
- **Discussion of Rapid Prototype Methodology**
- **Postion Paper on OLTP and DSS Solutions**
- **Discussion of Data Warehouses**

HPC Flexibly Links Mainframe Marketing Data to Parallel Processors

Paul Ferguson
Director, Infrastructure

Mainframes may no longer be the database platform of choice for 1990s marketers, but legacy systems remain a vital data warehouse that must be integrated into nearly every parallel marketing solution. Still a reservoir of customer and prospect data, mainframes are often the primary feeder systems to parallel processors and the principal output repository on which most marketing data is made accessible to users.

Today, marketers implementing large databases must not only migrate hundreds of gigabytes of mainframe data they must also create durable connections to legacy systems—a complex challenge Epsilon's High Performance Computing (HPC) division helps companies meet with increasing regularity.

To that end, HPC continuously evaluates the scalability, reliability and compatibility of inter-networking solutions from market leaders, such as Cisco and 3COM, with myriad parallel systems, mainframes, servers, terminals and PCs. HPC also studies marketers' bandwidth requirements based on their applications and transmission volumes to strategically determine the most effective networking solution for every customer.

Presently, HPC works with fiber data distributed interface (FDDI) and Ethernet connectivity solutions and is preparing to integrate high speed Asynchronous Transfer Mode (ATM) links on parallel and multiprocessing systems. FDDI supports a rated speed of 100-megabits per second and can be used to rapidly move high volumes of marketing data without traversing the corporate backbone or causing network congestion. FDDI also runs on fragile

Paul Ferguson helps marketers with the complex challenge of implementing parallel databases

fiber optic cable, which is more expensive to install than Ethernet and must be used selectively.

Ethernet operates on twisted pair copper wire on a considerably smaller bandwidth at a rated speed of 10-megabits per second. More rugged and less expensive than FDDI, Ethernet becomes overloaded with traffic in excess of 4 megabits per second but works very well on corporate-wide local area networks linking PCs, work stations, laser printers etc.

Able to adapt Ethernet and FDDI to almost any network, HPC utilizes each solution as customer applications warrant. In one recent case, HPC

designed a 100 gigabyte database for one of the world's largest direct marketers using both connectivity options. FDDI was used to move high volumes of data between a mainframe and a Sun SPARCcenter 2000. Ethernet was deployed to support PC and terminal traffic to and from the Sun SMP systems on which the client processes its marketing data.

Today, with HPC's support, Fingerhut has all the networking speed and connectivity it requires and is enjoying a superior return on its communications investment.