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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Mitchell Lazarus
Tel: 202/857-6466
Fax: 202/857-6395

June 8, 1994

William F. Caton, Acting Secretary
Federal Communications Commission
Room 222 -- Mail Stop 1170
1919 M Street N.W.
Washington DC 20554

Re: PR Docket No. 93-61, Automatic Vehicle Monitoring

Dear Mr. Caton:

On behalf of Symbol Technologies, Inc. ("Symbol"), a manufacturer of Part 15 spread spectrum data communications equipment, I am filing the original and one copy of this written ex parte communication and its enclosures pursuant to Section 1.1206(a)(1) of the Commission's Rules.

This letter responds to requests of Commission staff members for further detail on issues raised in the course of recent ex parte meetings.

U.S. Manufacture of Part 15 Spread Spectrum Products

All of Symbol's Part 15 spread spectrum products are manufactured entirely in the United States. Although Symbol does not maintain specific data, it is very confident that the domestic content of the parts used in manufacturing its products is at least 50%, and may be much higher.

To the best of Symbol's knowledge, the experience of its major competitors in this respect is comparable.

Market for Part 15 Spread Spectrum Products

Commercial Facilities. Symbol stated in its pleadings: "Since the Commission authorized spread spectrum under Part 15, users have invested over \$400 million in Part 15 radio products at 902-928 MHz, with a current annual growth rate of between 30 and 50 percent[.]"^{1/} This refers to the

^{1/} Comments of Symbol Technologies, Inc. at 3 (filed March 15, 1994) (citation footnote omitted).

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market for equipment used in commercial facilities such as stores, warehouses, etc.

The estimated market size of \$400 million derives from two figures. Symbol itself has shipped approximately \$80 million worth of Part 15 spread spectrum equipment; and Symbol's share of the market for such products is 20 percent.^{2/} Dividing \$80 million by 20% yields \$400 million.

Ninety percent of Symbol's spread spectrum products were shipped within the past three years. The estimate of the market growth rate was obtained from an industry publication,^{3/} and is consistent with Symbol's own experience.

Gas and Electric Utilities. In addition, the Utilities Telecommunications Council has provided Symbol with preliminary survey data showing that 28 responding gas and electric companies have already invested over \$132 million in automatic meter reading equipment at 902-928 MHz, and project an ultimate investment in this band of approximately \$527 million. The responding companies represent only a fraction of the gas and electric utilities providing service to the public nationwide.

Consumer Products. Part 15 spread spectrum technology at 900 MHz is used in a variety of consumer devices such as cordless telephones, wireless speakers, wireless headsets, wireless VCR-to-TV transmission, and long-range remote controls. Except for 900 MHz cordless telephones, which have been widely available for a year or two, most of these products are relatively new.

Despite diligent efforts, Symbol is not able to provide a reliable estimate of the market size for spread spectrum consumer equipment. There is a widely accepted consensus throughout the industry that the market is large and growing very fast; but supportable numbers are not yet available.

Projected Costs of Retrofitting 900 MHz Spread Spectrum Products

The total cost of retrofitting existing commercial 900 MHz spread spectrum equipment to operate at different frequencies would be at least \$440 million, and could run as high as \$740 million. These figures reflect only equipment

^{2/} Venture Development Corp., US Portable Data Collection Terminal Industry Planning Service (1993).

^{3/} Id.

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used in commercial facilities, and do not include consumer products or those installed by utilities.

Handheld terminals. There are approximately 400,000 handheld Part 15 spread spectrum terminals used today in commercial facilities.^{4/} Replacing the radio components of each would cost approximately \$200 in parts and \$150 in labor, for a total cost of $400,000 \times (\$200 + \$150) = \$140$ million.

Base Stations. Approximately 35,000 commercial facilities (stores, warehouses, etc.) each have an average of approximately three 900 MHz spread spectrum base stations installed.^{5/} The estimated cost of replacing each is \$3,000, including materials and labor. Replacing all of the base stations in use would cost approximately $35,000 \times 3 \times \$3,000 = \300 million.

If the retrofit were needed to permit operation at 2.4-2.5 GHz, each base station would have a substantially shorter operating range than it does at 900 MHz, and so more base stations would be needed -- an estimated additional 50-100% relative to the number now in use. This would raise the cost of retrofitting base stations to \$450-600 million.

Adding the estimated costs of retrofitting portable units and base stations at commercial facilities alone, the totals range from a low of \$440 million at frequencies comparable to 900 MHz to a high of \$740 million at 2.4-2.5 GHz.^{6/} These costs do not take into account any needed remodeling or losses due to equipment downtime.

* * * *

In response to requests from some Commission staff members, I enclose copies of Symbol's annual report and product information materials, and will be pleased to provide additional copies on request.

^{4/} This estimate is derived from Symbol's own shipments divided by its market share.

^{5/} Again, this estimate is derived from Symbol's own installations divided by its market share.

^{6/} The estimate of \$440 million for retrofitting all of the 900 MHz equipment in use (at current prices) provides added support for Symbol's estimate of a total market of \$400 million for commercial facilities.

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If there are any questions about this letter, please call me at the number above.

Respectfully submitted,


Mitchell Lazarus

FOR SYMBOL TECHNOLOGIES, INC.


Raymond A. Martino (date)
Director, RF Engineering

Enclosures

cc: Chairman Reed E. Hundt
Commissioner Andrew C. Barrett
Commissioner Rachelle B. Chong
Commissioner Susan Ness
Commissioner James H. Quello
Rosalind Allen
Rudolfo M. Baca
John J. Borkowski
Beverly G. Baker
Bruce A. Franca (w/encls.)
Ralph A. Haller
Jane E. Mago
Byron F. Marchant
Michael J. Marcus
Ruth Milkman
Richard M. Smith (w/encls.)
Thomas P. Stanley
Gregory J. Vogt
Richard K. Welch

SYMPOSIUM ON THE FUTURE OF THE PUBLISHING INDUSTRY



1993

Symbol Technologies, Inc.

Symbol Technologies, Inc. is the world's leader in providing data capture technologies that let businesses optimize their use of information. Through bar code driven data transactions, businesses gain the cost effectiveness and profitability. Symbol Technologies' 2-D barcode, laser scanning, and handheld computer technologies are key strategic building blocks in decision support systems for service, retail, distribution, postal and parcel delivery, and data transaction systems, mission critical applications, and base of information. Through bar code driven data transactions, businesses gain the cost effectiveness and profitability. Symbol Technologies' 2-D barcode, laser scanning, and handheld computer technologies are key strategic building blocks in decision support systems for service, retail, distribution, postal and parcel delivery, and data transaction systems, mission critical applications, and base of information.

On the cover of the report are images of our three core technologies: 2-D frequency data communication, the consolidation of our dual product lines into a single Products Group, and the integration of Symbol Technologies and the core manufacturing divisions into a single Symbol products. Through integration, we serve our customers with our consolidation and effective in meeting customer requirements. Clockwise from top are LRT 3800 laser scanner; PPT 4100 portable pen terminal; SE 1000 scanner; and the Spectram 1000 scanner-integrated terminal.

1993 financial highlights*(Dollars in thousands, except per share data)*

December 31,	1993	1992	% change
Net Revenues	\$359,980	\$344,940	4%
Earnings (Loss) from Operations	\$ 23,571	(\$ 19,343)	—
Net Earnings (Loss)	\$ 12,445	(\$ 16,250)	—
Earnings (Loss) per Share	\$ 0.50	(\$ 0.68)	—
Average Number of Shares Outstanding (in thousands)	25,072	24,028	4%
Cash and Temporary Investments	\$ 7,499	\$ 6,867	9%
Total Assets	\$419,615	\$378,666	11%
Stockholders' Equity	\$258,746	\$ 244,961	6%
Net Revenues per Associate	\$ 173	\$ 157	10%

1993 significant events

- Completed consolidation of product manufacturing in Bohemia, N.Y.
- Introduced key new products
 - PPT 4100 hand-held pen computer with integrated bar code laser scanner and radio
 - PDT 3100 scanner-integrated terminal with unique rotating laser scanning head
 - LS 3070, the first cordless hand-held bar code scanner
 - LS 9100 compact stationary hands-free scanner
- Shipped thousands of custom laser scanner engines for integration into next-generation United Parcel Service DIAD II portable data terminal
- IEEE voted to base the forthcoming standard wireless Media Access Control (MAC) protocol on a proposal submitted by Symbol, AT&T GIS and Xircom Inc.
- PDF 1000 systems selected for installation at state auto inspection centers
- Wal-Mart selected Symbol as its hand-held scanning supplier

t o o u r s h a r e h o l d e r s

1993 marked the return to profitability for Symbol. The U.S. economy and the retail sector, in particular, showed signs that recovery had finally taken hold. Symbol, strengthened by a major restructuring and consolidation program, began to show improved financial results. At the same time, we continued to develop new products and services to maintain market leadership and position Symbol for sustained growth in 1994 and beyond.

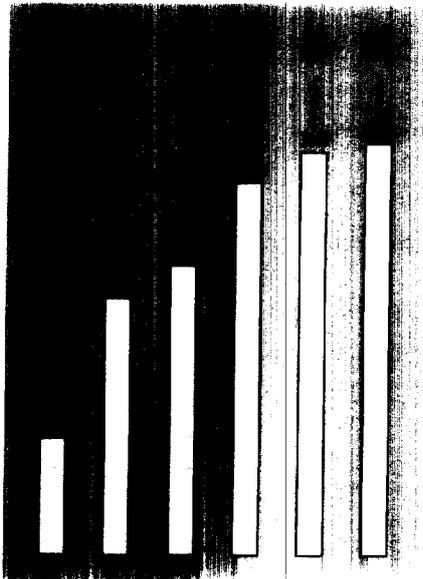
For the year, Symbol's net revenue was \$360.0 million, an increase of four percent over 1992 net revenue of \$344.9 million. Net income in 1993 grew to \$12.4 million (\$0.50 per share), compared with a \$16.3 million net loss (\$0.68 per share). The latter included pre-tax charges against earnings of \$40.9 million to streamline operations along functional

lines and to consolidate manufacturing and product engineering at a single location on Long Island.

Symbol's year began with a continuation of the softness experienced at 1992's end, first-half revenue declining 6 percent year to year. As we anticipated in last year's report, 1993's second half was in considerable contrast to the first with improvement in overall economic conditions and positive impact on revenue from market acceptance of products introduced in 1992. An encouraging indication of retail-sector recovery was the fourth quarter's 2.1 percent increase in sales of Symbol scanner products. The earnings improvement in the second half of 1993 was attributable to 16 percent revenue growth together with a decline in operating expenses and improved gross margins resulting from our consolidation and restructuring. New products introduced in 1993 and 1994 should contribute to greater revenue and to Symbol's strengthening financial performance in 1994.

restructuring to better serve our customers

In 1992's second half, we made a series of decisions directed at re-engineering the Company with the goal of greater effectiveness in serving our customers while eliminating redundancies and reducing expenses. After downsizing our salaried work force by 6 percent in August 1992, we followed in December 1992 with a plan to restructure our organization along functional lines and consolidate our manufacturing facilities. The consolidation and restructuring were financed from working capital, credit facilities that included a new \$50 million unsecured debt financing and an assistance package from New York State and local government.



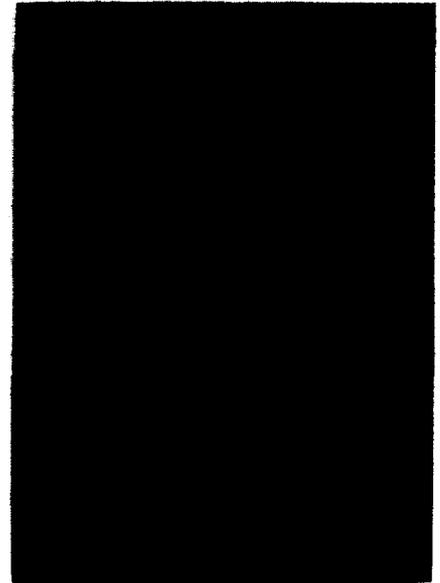
net revenues
(dollars in millions)

The consolidation of our scanner and terminal divisions into a single Products Group mirrors the increasing customer demand for Symbol scanner-integrated terminals, which now comprise approximately one-third of equipment revenue.

Central to the effort has been the transition of all portable terminal manufacturing and design operations to Bohemia, New York, which already was the site of our bar code scanning product operations. In our newly renovated 110,000-square-foot leased manufacturing facility, we centralized the Company's receiving function, incoming inspection process, raw materials handling, printed circuit board automation, final product assembly and test functions — all previously performed at sites distributed on either coast. This new operation not only has eliminated redundant overhead costs but also provides a single point of system staging and shipment to our customers. The consolidation also improves communication and coordination within our product marketing, engineering and manufacturing teams by streamlining the decision-making process which ultimately brings better products to market faster.

Although the physical transfer of operations is complete, we nevertheless anticipate an ongoing improvement in performance as we complete the tasks that contribute to our sustained success: training Associates across product lines, adding new products to the manufacturing mix and further incorporating automation capabilities for greater effectiveness. The customer remains uppermost in our mind throughout this major operational shift and build. In 1994, as efficiencies take hold, the restructuring and consolidation should enable us to better meet our planning schedule and better serve our customers.

The Symbol PPT 4100 is the smallest and lightest pen-based bar code scanning terminal

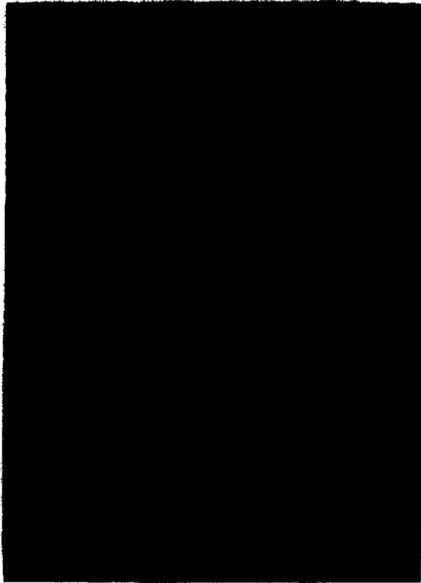


Network Systems Organization

Simultaneous to our consolidation of product operations was the structuring of a Network Systems Organization, which is responsible for design engineering, pilot installation, systems integration and support for both Symbol and third-party radio frequency-based data communication systems. The Network Systems Organization expands our RF Systems Design Center in San Jose, where it is able to draw on the extensive pool of engineering talent in data communications and systems resident in Silicon Valley.

The focus of the group is the design of wireless bar code data transaction systems based on our Spectrum One® network, and the integration of those high-performance networks into our customers' data networks and enterprisewide information systems. In 1990 Symbol was the first to commercially introduce a wireless network based on spread spectrum technology.

Our Spectrum One network has gained the acceptance of our customers and VARs because it is



The Symbol LST 3803, central to the "self-checkout" shopping concept in pilot in The Netherlands.

well suited to their bar code data transaction requirements. Its immunity to interference and the cellular nature of the system design provide increased reliability. It is simple to install, easily adapts to the customer's existing networking and computing systems and conveniently expands to accommodate additional data communications devices as the customer's needs grow.

Symbol's Spectrum One network in only three years has become the market-share leader in spread spectrum bar code data transaction systems with thousands of installations and hundreds of customers in a dozen countries.

Symbol leadership: from custom solutions to industry standards

The largest market for our Spectrum One systems continues to be in retailing, which traditionally has supported diverse standard and proprietary networks on the sales floor, in the backroom and in the warehouse. Because many customers still require custom connectivity and application solutions, Symbol has

dispersed program management and professional services Associates in our major sales regions. There, working in tandem with our software development group, they provide full support to key customers.

Recognizing the inefficiencies that lack of standardization can create, the growing wireless communications industry is working to establish common protocols for networking. As Spectrum One advances to the forefront of information technology, Symbol is taking a leading role in this search for open systems solutions. Our Spectrum One system incorporates a protocol that ensures low power consumption and long battery life for our portable terminals. In November 1993, the IEEE 802.11 committee voted to adopt a standard wireless Media Access Control protocol based on a proposal submitted by Symbol Technologies in partnership with AT&T GIS and Xircom, Inc. Although the full IEEE standards process may take several years, there is now broad support of our protocol from the technical community. More importantly, such recognition of our leadership by industry professionals helps assure our customers that in choosing Symbol, they have selected the right networking system and the right business partner.

new products: building blocks for future growth

Symbol's positioning in the marketplace evolves as we introduce new products that reinforce our strategy of building on our core expertise by expanding our bar code scanner-integrated product line. The success of our strategy is borne out by the doubling in 1993 of scanner-integrated terminal sales, which now represent two-thirds of terminal revenue.

Contributing to that increase is the PDT 3100 "aim-and-shoot" scanner-integrated terminal, introduced in 1993. It is the first Symbol product to incorporate our SE 1000, the world's smallest scan engine at about one cubic inch and one ounce. The compact PDT 3100, weighing less than a pound, features a unique swivel-head scanner design which adjusts instantly for right- or left-hand scanning operation. The PDT 3100 has been rolled out at Lechter's, the fastest growing kitchen and home supply retailer in the U.S., which found that the PDT 3100's one-piece ergonomic enables the capture of bar code data while using both hands to grasp a carton, significantly increasing productivity at store receiving.

In January 1994, at the National Retail Federation's major conference and exposition, Symbol introduced the PPT 4100, which integrates several key technologies for improving information management. The 16-ounce unit is a PC-compatible hand-held terminal that incorporates pen and touch input on a 5.5" x 3.0" screen; a graphical user interface; an SE 1000 scan engine; and a PCMCIA Spectrum One radio card. Available in mid-1994, the PPT 4100 is intended for use in information-intensive applications in retail and other environments where managers will benefit by accessing remote databases to make real-time inventory and purchasing decisions to significantly enhance customer service and improve productivity.

A pilot retail checkout system in Holland has reduced the waiting time at grocery checkout lanes. An innovative Symbol scanner, the LST 3803, is central to this "self-checkout" shopping concept. The user-friendly and comfortable-to-hold LST 3803 is simple to operate with familiar "plus", "minus" and "equal" scanning keys. The shopper simply scans each item as it is removed from the shelf and placed in the cart. Upon completion, the shopper returns the scanner and receives an itemized receipt, avoiding

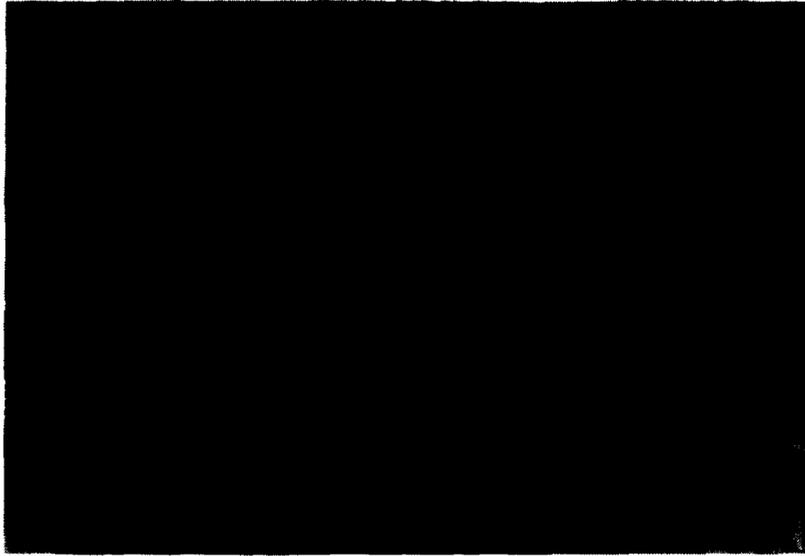
long checkout lines. Symbol developed the system with Albert Heijn of The Netherlands, Europe's largest grocery market chain and site of the pilot project, and TNO, a major Dutch industrial design firm. The system has completed its first year of testing with very favorable results and additional pilots are planned.

New products often require significant lead time from introduction to market acceptance. The strength shown by our scanning product line in 1993's second half derived from market acceptance of 1992-introduced products including the LT 1700, our first laser scanner designed to touch the bar code, and the rugged LS 3000 hand-held laser scanner for harsh environments, as well as the LS 5000, a compact hands-free scanner. The LS 9100, available in mid-1994, the smallest and lightest hands-free scanner on the market, will further strengthen our position as a full-line supplier of bar code laser scanners.

The Symbol LS 9100, the smallest hands-free projection scanner, combines outstanding performance with unique ergonomics



Raymond R. Martino, left,
and Jerome Swartz



The rate of adoption of emerging technologies is always difficult to predict. With the 1992 introduction of the Symbol PDF 1000® scanning system, our PDF417 two-dimensional symbology became a practical reality. While start-up revenue was derived from pilot system installations across a broad range of applications, intense market development was the key focus in 1993. Rollouts in a number of markets should begin in 1994. Early adopters of PDF technology include state motor vehicle departments. Driving their interest is central station auto inspection and monitoring as states move to comply with federal emissions standards being phased in over the next several years. PDF technology is used to scan vehicle identification information contained on the windshield, thus eliminating time-consuming and error-prone manual data-input methods. New York and Pennsylvania are the first states adopting PDF, and more are seriously considering such PDF-based motor vehicle applications.

repositioned for the '90s

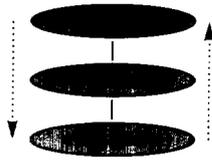
Looking ahead, Symbol's success depends not only on its proven technology leadership but also on its focus on customer service and continuous quality improvement. These are central to Symbol, and each Associate has performance objectives explicitly linked to these goals and the Company's profitability. That commitment and our more effective and lower-cost operating structure present near-term stability and strongly position Symbol for significant profitable growth. We believe that the fundamentals of our markets are solid. Our leadership position in our core technologies of bar code laser scanning, portable computing, wireless data communication and two-dimensional symbology systems provides a solid base upon which to continue to build. We are committed to the leading edge of bar code data system technology and are optimistic that long-term prospects for our industry and for Symbol remain strong.

Jerome Swartz

Chairman of the Board and Chief Executive Officer

Raymond R. Martino

President and Chief Operating Officer



data > information > decision

Information technology is integral to business operations, and as companies have come to regard information as a corporate asset, the technology used to gather, transmit and analyze data has grown increasingly valuable. Its role has expanded beyond that of supporting player to become central to operations. It drives novel methods of product delivery and inventory management, generates fresh concepts in retail and makes possible new trends in consumer behavior.

Through our bar code-based data transaction systems, Symbol Technologies provides business with data that leads to decision-making power. Symbol systems offer companies a competitive advantage: the power of timely and accurate information that leads to operating efficiency and effectiveness for greater profitability.

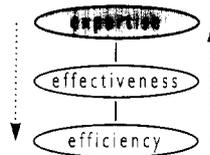
With more than two and a half million scanners and terminals installed worldwide and a record of innovative products, Symbol is the global leader in bar code-based data transaction systems with the expertise that has delivered and continues to deliver to a range of industries the power of immediate information.

Symbol holds innovation as an established core strategy as well as an established core value. Symbol, with the 1980 introduction of the first hand-held laser scanning device, changed the way bar code was read: by putting the reader in the user's hand, bar code's usefulness was multiplied as it moved beyond the point of sale to pivotal positions throughout retail and on into manufacturing, transportation, warehouse and distribution, health care and other industries. The

1990 introduction of the Symbol Spectrum One wireless network and the integration of Symbol's three core technologies — high-performance bar code scanning, portable computing and radio frequency data communications — continue to change the way data is accumulated and transmitted and to provide the power to make business decisions in real time.

Our systems are central to the new information-based business strategies of Just-In-Time, Quick Response and Efficient Consumer Response. These process-improvement techniques enable suppliers, manufacturers, distributors and retailers to excise non-value-added processes for the ultimate benefit of the customer. They streamline distribution, reduce inventory and provide elevated levels of customer service. Based on mature, accessible and cost-effective bar code technology, with its acknowledged eminent standards for accuracy and efficacy in data management, these high-performance systems bridge time and space barriers to solve business problems. They are software-rich and processing-powerful tools that are easy to operate and require little operator training.

With innovative solutions for a variety of applications, Symbol Technologies provides our customers with business benefits ranging from improved customer satisfaction to greater productivity, increased accuracy, higher efficiency and greater effectiveness. Through our vision for the marketplace, a history of technology partnership with our customers and expertise that has resulted in product-development firsts, Symbol continues to lead in information technology and business computing applications.



bar code's new dimension

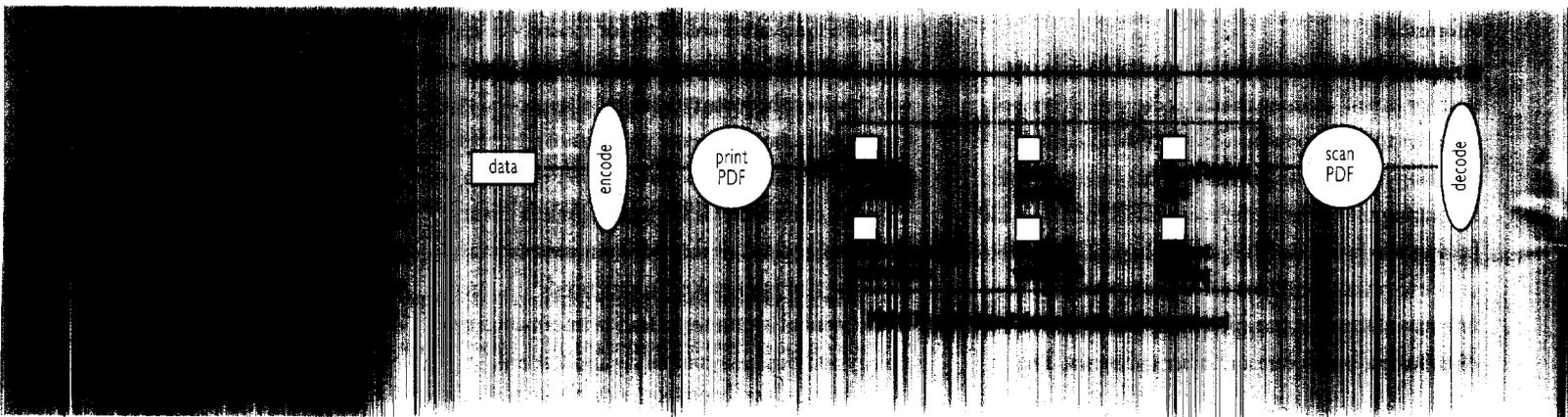
The pervasiveness of bar code makes it easy to overlook its impact on the routine of today's business as well as its influence on the lives of individuals. In environments ranging from retail point of sale through mail and package delivery to manufacturing operations, bar code technology provides the power to accurately and expeditiously identify, track and process goods and information. Because of bar code's inherent efficiency, it affects people in many ways each day.

Bar code data systems are moving to the next plane as PDF417, the revolutionary dense-code symbology invented by Symbol Technologies, makes its way into the marketplace. PDF417 is in early stages of implementation; nevertheless, its significance eventually could match that of traditional, linear bar code. Because PDF417 encodes more than a kilobyte of computer-readable data in an area smaller than that of a business card, applications for this "portable data file" are extensive.

Since the introduction of PDF417 and devices that

emergency room admissions. Enlisted personnel and dependents are provided ID cards that carry their patient profile encoded in PDF417 to speed admission to the network of emergency-care facilities. Metpath New England Labs uses a PDF-based system to identify and track patient specimens for testing. In the United Kingdom, pioneered at Oxford, PDF417 will become central to the identification of blood supplies transferred between transfusion centers and hospitals.

In the U.S., as states move to comply with standards of the federally mandated Clean Air Act, PDF417 is emerging as a fundamental component of emissions-testing systems as well as central station auto inspection. Symbol's PDF scanners are key to centralized emissions-testing systems to read symbols containing make, model and vehicle identification number. PDF is attractive for the gamut of DMV functions, ranging from driver license renewal and automotive record keeping to other applications making use of the windshield VIN number. PDF is helping control fraud in New Zealand, where road-user charges are encoded in



instantly and automatically read and decode both PDF417 and linear codes, applications have emerged that not only improve business operations but also touch our lives.

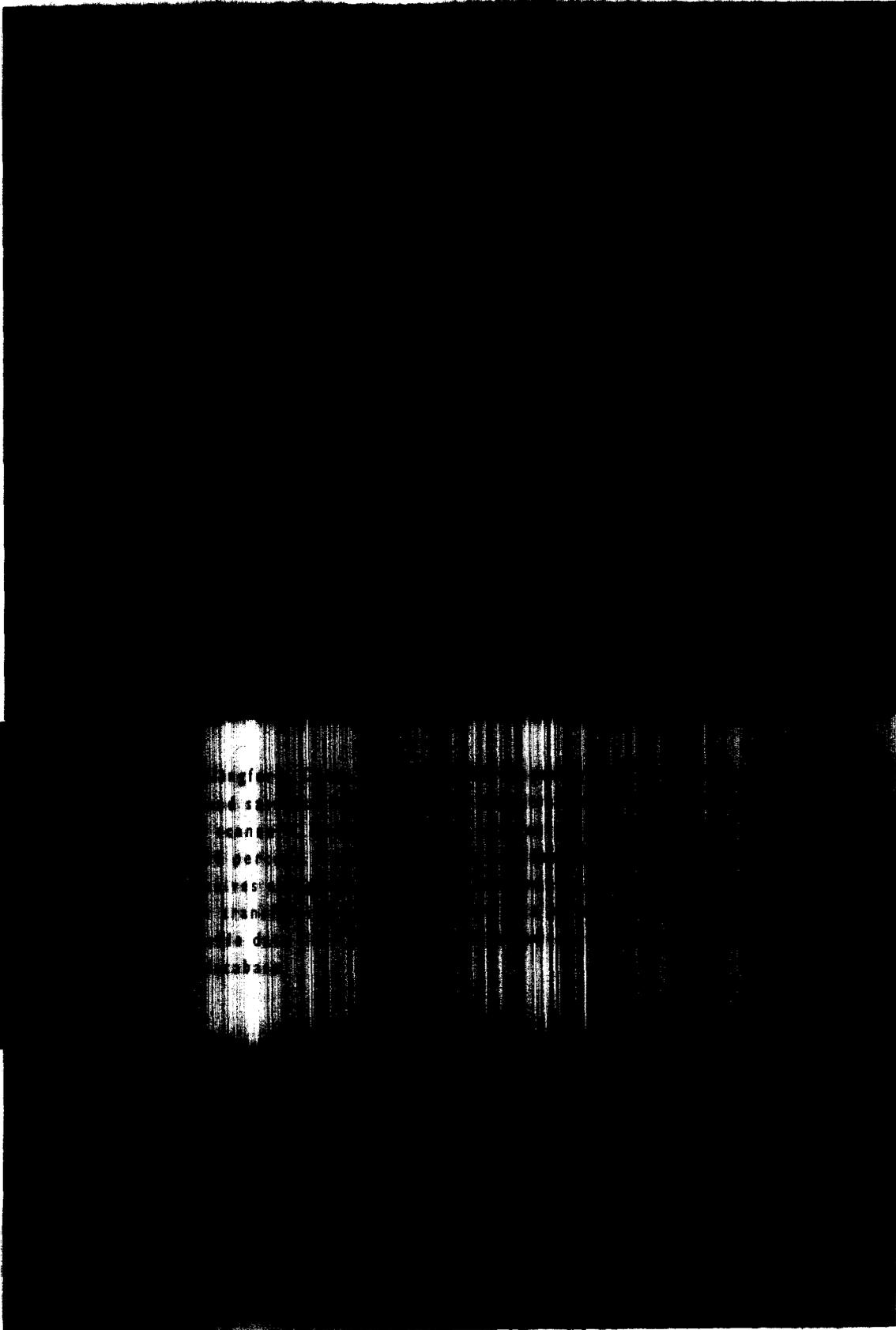
Nowhere is rapid and reliable data more pressing than in health care, where Symbol's PDF417 is effective in a number of life-critical applications.

In Texas, Wilford Hall Medical Center at Lackland Air Force Base relies on PDF417 to expedite

PDF windshield stickers and scanned at roadside checkpoints.

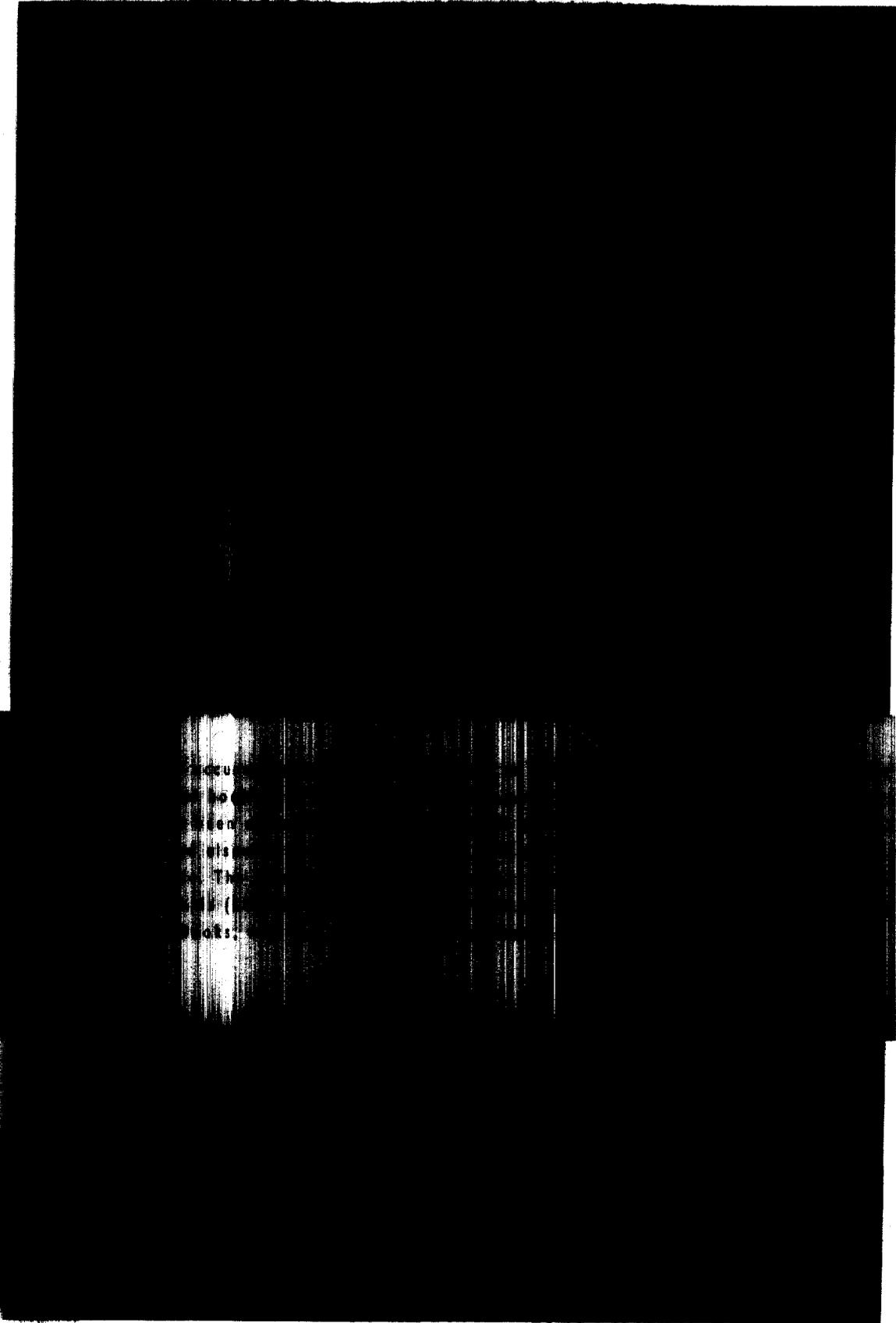
PDF417 also is ideally suited to a wide range of commercial and industrial applications including bills of lading and shipping manifests, work-in-process tracking and materials storage and tracing. With its acceptance and adoption by a variety of customers and standards groups, Symbol's PDF417 is emerging as the de facto dense-code symbology standard.

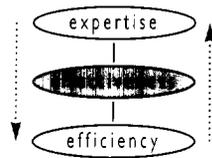
both data accuracy and specimen handling are improved



ing
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technology translates into enhanced customer service





retail's information base

Retailers continue to invest in Symbol's products and systems as foundation for distinct competitive advantages: finely tuned inventory management, value pricing, low-cost distribution, customer service and shopping convenience.

Central to these is bar code, scanned for data-entry efficiency. Integration of Symbol's laser bar code scanners with our unique application-specific portable computing and radio frequency data communications technologies provides the retailer continual interaction with the latest information anywhere, anytime. With mission-critical information in their hands, retailers are efficient and effective in controlling inventories and providing top-notch customer service at each link in the distribution chain — from warehouse to store loading dock to the point of sale.

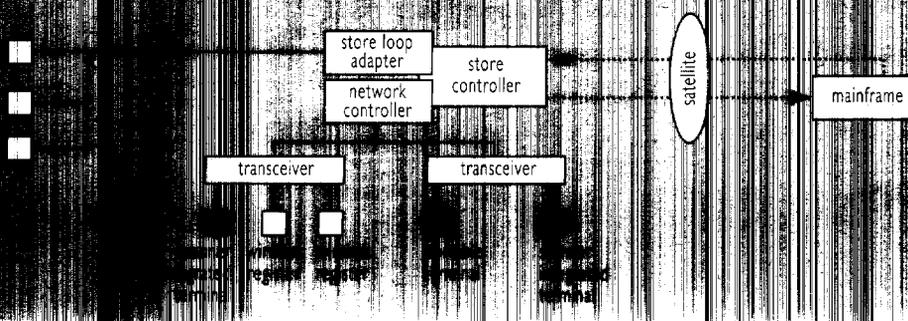
On the sales floor, Symbol's hand-held scanner-integrated terminals serve to reduce labor expense, improve inventory position and increase customer satisfaction. Leading specialty and department store retailers such as Hudson's Bay Company, May

chain, maintains accurate shelf pricing with an easy-to-use RF verification process.

At point of sale, Symbol's innovative hand-held and hands-free scanners are shortening checkout lines and delivering more accurate inventory-movement data for stock replenishment for hundreds of retailers. From POS transaction devices carried by sales staff to completely mobile wireless cash registers, Symbol lets retailers such as Mervyn's Stores, the moderate-price department store division of Dayton-Hudson, and Métro, the giant European wholesaler/retailer, creatively change the way they work, whether in "warehouse-style" stores or in image-conscious boutiques.

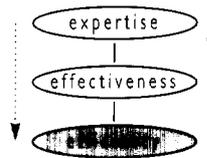
Technology's ultimate bottom-line leverage is in enabling shoppers to perform tasks that previously required store personnel, thereby decreasing labor expense, increasing service and securing customer loyalty.

Symbol's PriceChecker kiosk allows Toys "R" Us shoppers to scan items to retrieve pricing information before reaching the checkout. The Gift Certificate



Company, Kmart, Venture Stores and The Gap document significant bottom-line productivity gains in price- and inventory-management activities. At Lowe's Companies, one of the largest home improvement retailers in the U.S., bar code-based receiving procedures have cut the time it takes to expedite merchandise from trucks to store shelves. Ralphs Grocery Co., a leading West Coast supermarket

Center, a self-service gift-registry kiosk, uses Symbol's scanner-integrated terminals to let registrants compile their own gift list without sales assistance. Albert Heijn, a leading-edge supermarket retailer in The Netherlands, has initiated a checkout system that allows shoppers to complete virtually the entire process by carrying a scanner on their shopping cart to scan each item selected.



ensuring on-time delivery

The emergence of bar code data transaction systems as a strategic technology has enabled fundamental change in the way global postal services and parcel-delivery companies conduct their business.

Each day, millions of pieces of mail leave customers' hands to travel a complicated route that may include sorting hubs, distribution centers, transfer stations and offices in multiple nations. It makes a timely arrival at its destination, often in less than a day. A bar code generally accompanies the document or parcel each step of the way, or a bar code may serve as the key identifier on a mail bag or pallet at stops en route.

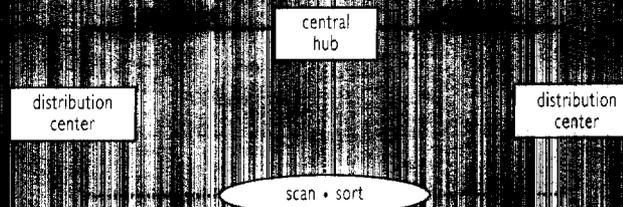
United Parcel Service has worked with Symbol for more than a decade to develop scanning and data collection tools and solutions for improved productivity and customer service. In 1993, UPS unveiled its DIAD II, the second-edition portable data collector used by drivers to capture data from bar-coded packages. Each DIAD incorporates a Symbol-developed bar code laser scan engine that is lightweight and

Symbol scanner-integrated terminals. In 1993 and 1994, the USPS is adding more than 7,000 Symbol LDTs, which combine a full-powered DOS computer with a non-contact scanner, allowing the post office to track bar-coded mail sacks, which are scanned. The accumulated information is captured in the LDT's memory, then downloaded to individual computers for storage and analysis.

The USPS also relies on Symbol's expertise in portable data collection to increase its efficiency in delivering the mail. USPS route inspectors, armed with the powerful Symbol PDT 3300 portable computer, analyze individual mail carrier delivery routes and carefully plot the optimum route.

The German Parcel Service uses the Symbol LDT 3805 for scanning and data collection at receiving and dispatch and it uses Symbol hand-held scanners within its network of hub-depots and field sites.

In Bahrain, DHL recently opened a 7,000-square-meter center to track and route parcels throughout the Middle East. With the Symbol Laser Radio Terminal

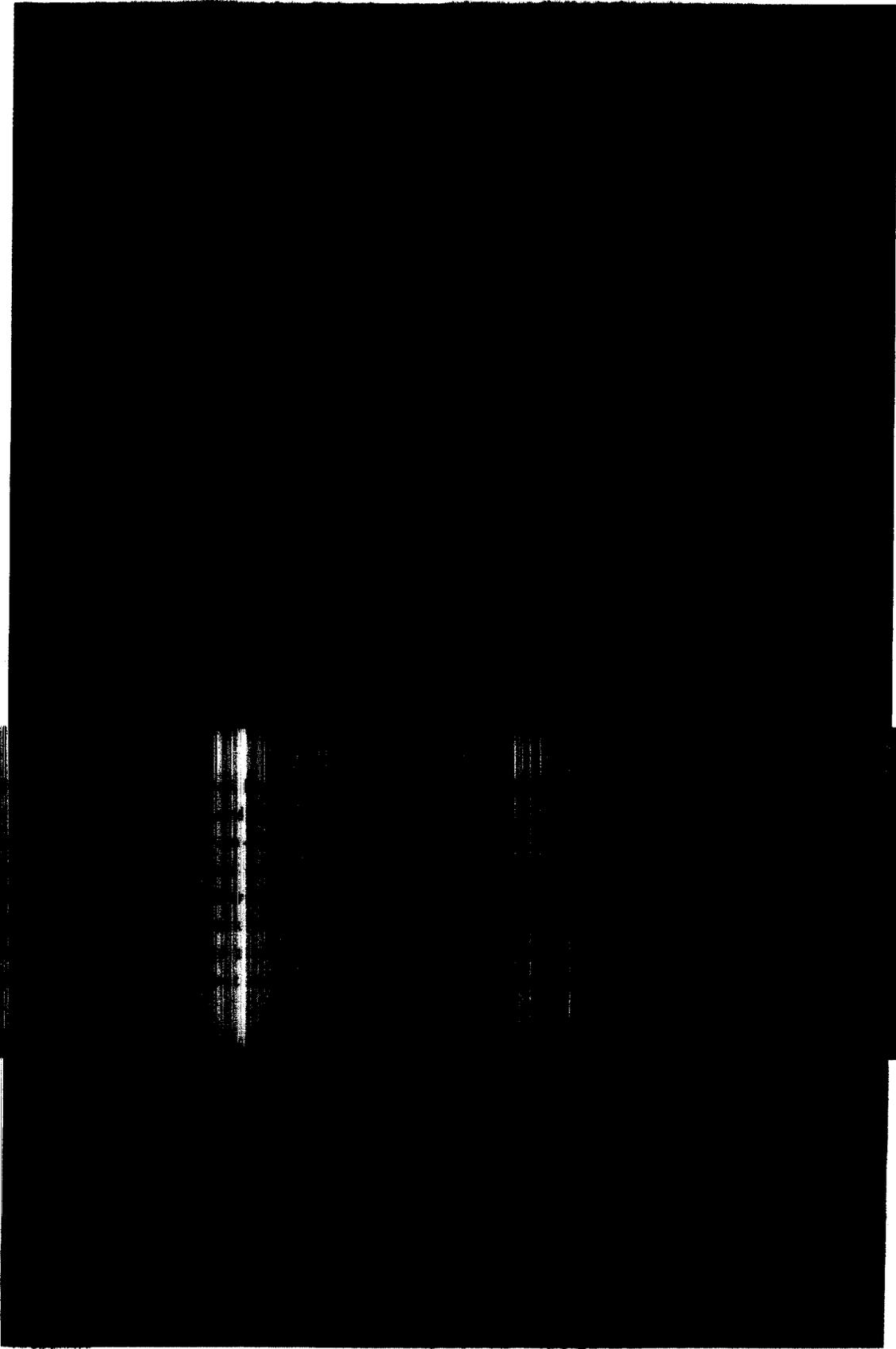


extremely durable; the engine provides superior scanning performance.

Since 1986, Symbol has partnered with the United States Postal Service to develop bar code solutions, most recently the tracking of Express Mail throughout the 50 states and territories and its 48,000 post offices. Symbol, through systems integrator SHL Systemhouse, has rolled out approximately 20,000

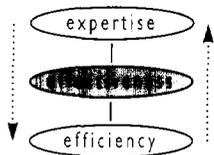
(LRT 3800), which combines a laser bar code scanner, portable computer and radio frequency capabilities in a hand-held device, DHL tracks and routes bar-coded parcels and delivery bags in real time. Scanned information is communicated to the hub's computer via the Symbol Spectrum One network; parcels are quickly sorted to waiting planes and can be easily tracked and traced to their final destination.

bar code delivers speed and accuracy



tracking product throughout the plant and on to the customer





partners on the pipeline

Logistics is regarded as a vital business function of the 1990s, with computers and communications networks considered not simply as computing technology but as coordination technology. Logistics has expanded in scope to embrace overall management of inventories and supporting information systems.

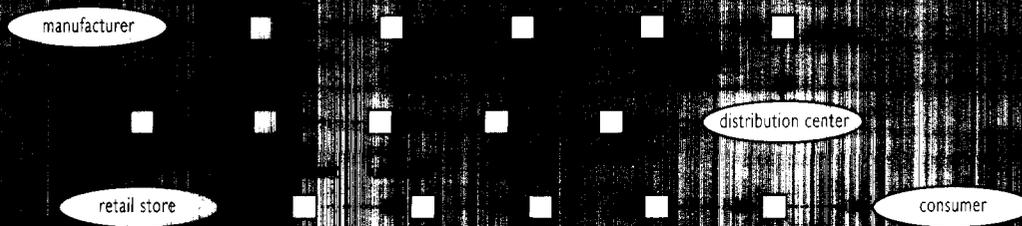
Partners along the distribution pipeline — manufacturers, transportation companies and retailers — optimize systems, processes and inventory levels as they pass the information baton. Effective logistics control for Just-In-Time, Quick Response and Efficient Consumer Response strategies depends on bar code-based systems to eliminate bottlenecks, cost effectively reduce inventory levels and provide a high degree of customer service.

Through automated bar code data transaction systems, warehouse operations are efficient, accurate and timely from receiving dock to shipping bay with pick and put-away and inventory management in between.

At its 200,000-square-foot New Jersey warehouse, its sole U.S. facility, Moda Distribution

based systems to realize the benefits of raw material inventory, production tracking, work-in-process tracking, labor efficiency, improved inventory control, quality assurance and shipping control.

At its 1.2 million-square-foot PBX manufacturing facility in Denver, AT&T relies on Symbol's Spectrum One network and Symbol Laser Radio Terminals for accuracy and efficiency in loading electronic-component reels on automatic feeders of robots that insert components on printed circuit boards. Operators use the Symbol LRT 3800, which combines in a light weight hand-held portable unit a powerful scanner-integrated computer and wireless radio frequency data communications capability, to scan reels of components that populate the circuit board. Each board setup requires 30 to 80 reels of components; with the automated system, installed by Symbol VAR Innovative Products & Peripherals Corporation, the mistake rate is now negligible and the 15-minute manual checking process was reduced to a two-minute operation.



Services telescoped customer delivery times and streamlined shipping and billing procedures with Symbol Laser Radio Terminals operating on the Symbol Spectrum One wireless LAN. Moda, which distributes apparel of a number of Italian designers, not only eliminated the periodic inventory count that had shut down warehouse operations but also reduced error, delivery time and labor costs.

Effective factory automation depends on bar code-

Integration of the Symbol Spectrum One network with standard software systems such as CA WarehouseBoss from Computer Associates is leading to its greater functionality in environments beyond retail. In addition, the Symbol DM 800 data collection terminal, which accepts data from machinery and measurement devices, speeds the flow of intelligence throughout the manufacturing process.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations

The following table sets forth for the years indicated (i) certain revenue and expense items expressed as a percentage of net revenues and (ii) the percentage increase or (decrease) of such items as compared to the corresponding prior year.

Year Ended December 31,	Percentage of Revenues			Year to Year Changes (1)	
	1993	1992	1991	1993 vs 1992	1992 vs 1991
Net Revenues	100.0%	100.0%	100.0%	4.4%	8.0%
Cost of Revenues	51.6	50.3	48.1	6.9	13.1
Amortization of Software Development Costs	1.9	1.3	0.6	54.6	128.2
Gross Profit	46.5	48.4	51.3	0.4	1.9
Operating Expenses:					
Engineering	9.7	9.1	7.8	11.1	25.0
Selling, General and Administrative	29.5	32.2	30.6	(4.4)	14.1
Amortization of Excess of Cost Over Fair Value of Net Assets Acquired	0.8	0.8	0.8	3.6	1.7
Restructuring Costs	—	11.9	—	(100.0)	100.0
Total	40.0	54.0	39.2	(22.7)	48.7
Earnings (Loss) from Operations	6.5	(5.6)	12.1	—	—
Net Other Expense	—	(0.4)	—	(100.0)	100.0
Net Interest Expense	(1.1)	(0.5)	(0.6)	158.7	(15.3)
Earnings (Loss) Before Income Taxes and Cumulative Effect of Accounting Change	5.4	(6.5)	11.5	—	—
Provision (Benefit) for Income Taxes	1.9	(2.0)	4.4	200.0	(150.2)
Earnings (Loss) Before Cumulative Effect of Accounting Change	3.5	(4.5)	7.1	—	—
Cumulative Effect of Accounting Change	—	0.2	—	(100.0)	100.0
Net Earnings (Loss)	3.5%	(4.7)%	7.1%	—	—

(1) Year to year changes in earnings are not applicable due to the loss incurred for the year ended December 31, 1992.

For the year ended December 31, 1993

Net revenues of \$359,980,000 for the year ended December 31, 1993, increased 4.4 percent over 1992. The increase in net revenues, notwithstanding a 4.3 percent decrease due to unfavorable foreign exchange fluctuations, resulted primarily from a significant rise in worldwide terminal sales, principally related to scanner integrated terminals. While worldwide scanner sales increased during the second half of 1993 compared with the prior year, for the year ended December 31, 1993, they remained relatively constant compared with 1992.

Geographically, North America revenues increased 10.8 percent over the prior year. International revenues declined 7.4 percent due to the unfavorable exchange rate fluctuations described above. North America and International revenues continue to represent approximately two thirds and one third of net revenues, respectively.

Cost of revenues (as a percentage of net revenues) of 51.6 percent for the year ended December 31, 1993, increased from 50.3 percent in 1992. This increase resulted primarily from a combination of the impact on revenues of unfavorable fluctuations in foreign exchange rates discussed above and a change in the mix of the Company's products sold to a higher percentage of lower margin terminal products. The increase was offset, in part, by reduced manufacturing costs related to the consolidation and restructuring program adopted by the Company in 1992.

Amortization of software development costs increased to \$6,799,000 for the year ended December 31, 1993, from \$4,398,000 in 1992 due to new product releases.

Engineering costs increased to \$34,788,000 for the year ended December 31, 1993, from \$31,326,000 in 1992. The increase reflects expenses incurred in connection with the continuing research and development of new products and the improvement of existing products.

Selling, general and administrative expenses decreased to \$106,412,000 for the year ended December 31, 1993, from \$111,362,000 in 1992. As a percentage of revenues, such expenses were reduced to 29.5 percent for the year ended December 31, 1993, from 32.2 percent in 1992. The decrease primarily reflects cost reductions realized as a result of the workforce reduction and the consolidation and restructuring program adopted by the Company in 1992, and lower International expenses due to a strengthened U.S. dollar.

Interest expense increased to \$4,663,000 for the year ended December 31, 1993, from \$2,067,000 in 1992 due to the issuance of Senior Notes in March 1993 described in Note 8 of Notes to Consolidated Financial Statements.

The effective tax rate for the year ended December 31, 1993, increased to 36.0 percent from 31.1 percent in 1992. The increase primarily resulted from the effect on the rate for 1992 of certain non-recurring permanent differences between financial accounting income and taxable income, as well as the effect of changes in the amount of other permanent differences. The effective tax rate for 1993 reflects the benefit for the Federal research and development credit earned since July 1, 1992, as the credit was retroactively reinstated during the third quarter of 1993.

At December 31, 1993, the Company had net deferred tax assets of \$21,930,000, consisting of current deferred tax assets of \$29,166,000 and long-term deferred tax liabilities of \$7,236,000. The current deferred tax assets reflect a valuation allowance of approximately \$663,000 relating to New York State investment tax credit carryforwards which may be recaptured or may expire unutilized due to the limited seven year carryover period. No other valuation allowance is necessary due to the Company's history of profitability and anticipated future profitability.

For the year ended December 31, 1992

Net revenues of \$344,940,000 for the year ended December 31, 1992, increased 8.0 percent over 1991. The increase in revenues resulted primarily from a 30.4 percent rise in worldwide portable terminal sales. Higher terminal revenues were partially offset by a 19.1 percent reduction in domestic bar code scanner sales due to a weakened domestic retail market as well as heightened competition from licensees and the saturation of point-of-sale scanning among the nation's major non-food retailers. Net revenues were negatively impacted by approximately 1.6 percent due to unfavorable fluctuations in foreign exchange rates.

Cost of revenues (as a percentage of net revenues) of 50.3 percent in 1992 increased from 48.1 percent in 1991 due primarily to a change in the mix of the Company's products sold since a higher percentage of lower margin portable terminal products were included in 1992 revenues as discussed above.

Amortization of software development costs increased to \$4,398,000 for the year ended December 31, 1992, from \$1,927,000 in 1991, due to product releases.

Engineering costs increased to \$31,326,000 for the year ended December 31, 1992, from \$25,066,000 in 1991. This increase reflects expenses incurred in connection with the continued introduction and development of new products and the improvement of existing products.

Selling, general and administrative expenses increased to \$111,362,000 for the year ended December 31, 1992, from \$97,604,000 in 1991. This increase primarily reflects higher expenses incurred in connection with the expansion of the Company's worldwide sales activities to support a greater than 20 percent increase in net revenues during the first half of 1992 over 1991. Such expenses, as a percentage of net revenues, remained constant in the first half of 1992. However, the decrease in revenues in the second half of 1992 more than offset the reduction in selling, general and administrative expenses as a result of the workforce reduction and the consolidation and restructuring program implemented as described in the following paragraph.

In August 1992, the Company implemented a workforce reduction designed to reduce costs and improve operating efficiencies. In December 1992, the Company announced a program to restructure its operations by consolidating engineering and manufacturing operations and streamlining the sales, marketing and finance and administrative departments along functional lines. Pre-tax charges for both programs totalling \$40,933,000, principally for associate severance and related costs, transfer of manufacturing and engineering operations, lease terminations and losses on asset dispositions are reported as a separate item in the results of operations for the year ended December 31, 1992.

Other expense for the year ended December 31, 1992, of \$4,768,000 represents costs for the settlement and related legal fees of the Company's shareholder class action and derivative lawsuits. Other income for the year ended December 31, 1992, includes the reversal of \$3,200,000 of previously recorded after-tax preacquisition contingency reserves, which are no longer required.

The effective tax rate for the year ended December 31, 1992, decreased to 31.1 percent from 38.0 percent in 1991 primarily due to the amortization of excess of cost over fair value of net assets acquired, income of foreign subsidiaries taxed at rates higher than U.S. rates, losses of foreign subsidiaries for which no benefit has been recognized and certain other permanent differences. (See Note 9 of Notes to Consolidated Financial Statements for a reconciliation of the U.S. Federal statutory rate to the Company's effective tax rate.)

The cumulative effect of accounting change represents the effect of the adoption of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" ("SFAS 109"), as of the beginning of 1992. This accounting change resulted in a restatement of the Company's deferred tax accounts as of January 1, 1992, which resulted in a charge of \$744,000 (\$0.03 per share) for the year ended December 31, 1992. Additionally, the adoption of SFAS 109 resulted in an increase in the income tax benefit recognized during 1992 and, therefore, a decrease in the loss before cumulative effect of accounting change of \$9,110,000 (\$0.38 per share).

At December 31, 1992, the Company had net deferred tax assets of approximately \$24,672,000, which reflect a \$560,000 valuation allowance relating to state investment tax credit carryforwards which are likely to be subject to recapture. No other valuation allowances for deferred tax assets are necessary due to the Company's history of profitability and anticipated future profitability.

Liquidity and Capital Resources

The Company utilizes a number of measures of liquidity including the following:

Year Ended December 31,	1993	1992	1991
Working Capital (in thousands)	\$141,739	\$88,623	\$122,812
Current Ratio (Current Assets to Current Liabilities)	2.8:1	1.9:1	3.5:1
Long-term Debt to Capital (Long-term debt to long-term debt plus equity)	19.3%	5.6%	7.6%

Current assets at December 31, 1993, increased \$35,457,000 from December 31, 1992, principally as a result of an increase in inventories due to higher demand and to facilitate product availability to customers during the consolidation of the Company's manufacturing operations, in accounts receivable due to higher sales levels and in prepaid expenses.

Current liabilities at December 31, 1993, decreased \$17,659,000 from December 31, 1992, primarily due to incurred restructuring costs, repayment of short-term borrowings outstanding and a decrease in income taxes payable offset by an increase in accounts payable in support of higher inventory levels.

The aforementioned activity resulted in a working capital increase of \$53,116,000 for the year ended December 31, 1993. As a result, the Company's current ratio at December 31, 1993, increased to 2.8:1 from 1.9:1 at December 31, 1992.

Working capital decreased to \$88,623,000 for the year ended December 31, 1992, primarily due to accrued restructuring costs and an increase in short-term borrowings and income taxes payable offset, in part, by an increase in deferred income taxes and accounts receivable coupled with reduced cash from debt payments and purchases of Common Stock.

The Company used cash in operations during 1993 for incurred restructuring costs and to increase inventories as previously described. Such activities were financed principally through the issuance of Senior Notes. The Company generated overall positive cash flow for the year ended December 31, 1993. For the year ended December 31, 1992, the Company experienced negative cash flow because of required investments in receivables, equipment and software development.

Property, plant and equipment expenditures for the year ended December 31, 1993, totalled \$18,084,000 compared to \$14,974,000 for the year ended December 31, 1992. Such expenditures were financed by existing cash and temporary investments. In April 1993, the Company signed a lease for an additional 110,000 square foot facility for a term of five years. The Company has spent approximately \$10,000,000 to renovate and equip this facility. Of this amount, \$3,000,000 will be provided by a seven-year loan, bearing interest at 1% from an agency of the State of New York and the remainder will be from working capital. The new facility, which is located within one-quarter mile of the Company's present executive offices, will serve as the principal manufacturing facility. Additionally, the Company has reached an agreement to acquire a forty acre parcel of land in Suffolk County, New York for \$5,000,000. The Company intends to commence construction of a corporate headquarters and manufacturing facility on this site by the end of 1995. The Company does not have any other material commitments for capital expenditures.

At December 31, 1993, the Company had \$62,077,000 in long-term debt outstanding, excluding current maturities. In March 1993, the Company issued \$25,000,000 of its 7.76% Series A Senior Notes due February 15, 2003, and \$25,000,000 of its 7.76% Series B Senior Notes due February 15, 2003, to four insurance companies for working capital and general corporate purposes. The Series A Senior Notes will be repaid in equal annual installments beginning in February, 1995. The Series B Senior Notes will be repaid in equal annual installments beginning in February 1997. The remaining \$12,077,000 is primarily related to the Industrial Development Bond financing completed in October 1989.

The long-term debt to capital percentage at December 31, 1993, increased to 19.3% from 5.6% at December 31, 1992, due to the aforementioned issuance of Senior Notes, offset by a second installment payment of the Industrial Development Bond financing of \$2,368,000. The long-term debt to capital percentage at December 31, 1992, decreased to 5.6% from 7.6% at December 31, 1991, as a result of prepaying a United Kingdom mortgage note of approximately \$4,400,000 and payment of the first installment of the Industrial Development Bond financing of \$2,368,000.

The Company has loan agreements with three banks pursuant to which the banks have agreed to provide lines of credit totalling \$30,000,000. As of December 31, 1993, the Company had no outstanding borrowings under these lines. These agreements expire between June 30, 1994 and December 31, 1994.

The Company purchased 144,100 shares of its Common Stock in open market transactions during 1993 at a total cost of \$1,881,000 pursuant to the stock repurchase program authorized by the Board of Directors on May 4, 1992.

The Company believes that it has adequate liquidity to meet its current and anticipated needs from the results of its operations, existing credit facilities and working capital.

In the opinion of management, inflation has not had a material effect on the operations of the Company.