



# newsletter

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The management  
Newsletter for all  
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related  
technologies.

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## The unfortunate image....

....that was projected by Telxon, during the latter half of 1989 and the beginning of 1990, was of a company that was temporarily off-balance, defensive and somewhat unfocused. The poor sales and earnings performance throughout fiscal year 1990 (ended 3/31/90) seemed to have caught everyone -- inside and outside the company -- by surprise (*SCAN* June 89; Sept 89).

During an interview with *SCAN Newsletter* last January, President Ray Meyo spoke of his company as seemingly out of control and plagued with such problems as "sloppy procedures, inflated accounts receivable, lack of enforced discipline, and bad decision making." But he pointed out that he had posted 10 consecutive years of profitable growth, and he bitterly characterized the very negative reactions of some of the Wall Street financial analysts to that one off-year as the "what-did-you-do-for-me-today syndrome."

[As a result of the FY 1990 poor performance, the company received more attention from the financial press than ever before. A December 25, 1989 *Forbes* magazine article stated: "Last month, Telxon hit the rocks." *Forbes* went on to describe cost overruns, delivery delays, technology gaps and doubled inventories. It quoted Meyo as explaining: "You have to expect some of that when you're the leading company in an emerging market."

In a much-talked-about *Wall Street Journal* article (5/10/90), the attention was shifted from the company to Meyo himself, with the headline: "Should a CEO bet his job on an upturn?" Meyo was quoted as having made himself the "fall guy," at the company's 1989 annual meeting, when he reportedly pledged that he would "quit if Telxon's performance didn't improve within a year." One management expert was quoted in the article as characterizing that statement as "the final act of a desperate leader."]

In a follow-up interview with *SCAN*, in mid-July, Meyo vehemently denied that he ever stated those attributed words in that way. "I have always assumed personal responsibility for the company's performance," he explained to *SCAN*, "but I never said I would quit if we didn't turn around in one year."

Meyo described what he sees as the vastly changed company he now heads up:



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INCLUDING THE INTERNATIONAL EDITION

- Of the top 10 corporate executives who were running the company 12 months ago, only one remains -- and that's Meyo himself! Replacing the 9 who quit, or were fired, is a new "leaner, meaner" team led by Meyo (President and CEO), Dan Wipff (Senior Executive VP, COO and CFO), Mike Grimes (VP Sales and Marketing) and John Cribb (Senior VP, International). Wipff has been a Telxon Director for 17 years, but did not have an operating position with the company; Grimes was a major distributor for Telxon Products; Cribb was part of the European sales organization since founding Telxon Ltd. in the UK in 1982.
- For the first quarter of FY '91 (6/30/90), sales were \$40.2 million (up 14%) and net earnings (after extraordinary items) were \$1.5 million (vs. \$0.5 million last year). Current backlog is reported at an all-time high for the company, and the number of days outstanding on accounts receivable have been brought down to 73 days from 93 days one year ago.
- R & D is expanding with new products scheduled to emerge later this year. Marketing VP Grimes anticipates that an increasing proportion of all systems sold will include radio frequency communications (estimated at 35%-40% of all Telxon installations in the past few years). Telxon is now committed unequivocally to the "spread spectrum" type of RF -- already adopted by Symbol/MSI and Intermecc (SCAN Feb 90).

The company has entered into an agreement with an unnamed vendor, reported to be a specialist in RF systems, to re-engineer Telxon's radio communications package. According to Grimes, this joint effort will result in a new portable computer, with an integrated RF unit, which will be introduced at SCAN-TECH 90 (October 2-4) and will be out for beta testing by the end of the year.

Telxon's major marketing strengths have traditionally been directed toward supplying retailers and their associated industries with portable tele-transaction computers. Currently about 55%-60% of sales are to retailers and 10% to wholesalers/distributors supporting that market. The balance (30%-35%) is targeted for field data entry (sales reporting, market research), route accounting and field service operations. Meyo and Grimes are proud of the fact that Telxon is the sole supplier to 21 of the 25 leading US food chains (with some sales going to 3 others in this top group); and that the company has similar overwhelming penetration among the food and drug wholesalers.

When pressed about whether this data suggests that the company's primary market -- retailing -- is close to saturation, Meyo literally jumps at the opportunity to reply. "As we develop new products," he vigorously contends, "our customers periodically upgrade their systems." He cites Revco, a leading drug chain, as an example. "In 1973," he says, "we installed one simple, non-programmable unit in each Revco store. We have replaced these systems in 1978, 1983 and again this year -- each time with more units per store and more sophisticated systems."

The financial problems experienced last year have not caused the company to shy away from issuing sales and earnings forecasts. For the current fiscal year, Meyo predicts that Telxon will post \$160-\$165 million in sales (up from last year's \$143 million) with earnings of \$.49 to \$.54 after extraordinary items. He also predicts that his company will be increasing its market share of

product sales, both in the US and abroad (currently estimated at 35%-40% and 15%-20% respectively). Grimes estimates that the worldwide market for Telxon's type of portable telecommunications computers is currently running at about \$500 million, with 50% in the US.

COMMENT

*Conducting interviews with a chief executive and his supporting cast can only provide part of the input in evaluating a company. In the final analysis, of course, the company must come through with performance.*

*This was a much-chastened Ray Meyo that we spoke with two weeks ago. Although he may not be quite as sure-footed and hard-driving as we remember him during past outings, however, he still remains confident about the successful future of his company. During the nine years when he whizzed by his chief competitor, the faltering MSI Data, Telxon recorded memorable sales and earnings performances. The company and its head man could do no wrong. But as the market and the technology matured, and competition intensified, sales increases and profitability were no longer automatic. The company needed the restructuring and re-orientation that it is now completing.*

*One very fortunate circumstance that has helped Telxon during this difficult year has been the transition status of its main rival. While MSI Data has been recovering from its acquisition battle and acclimating itself to its new home with Symbol Technologies, it has not been able to assume the aggressive stance in the market that could have hurt Telxon -- even more than it was already damaging itself.*

*Both of these industry leaders may now be emerging stronger in product and organization than before and they should be ready to renew their strenuous head-to-head battles in the coming years.*

There are strong indications....

....that NCR is not currently prepared to market their Model 7860 hand-held omnidirectional scanner. The company had introduced this unit at the Quick Response '90 Conference in March and it was to be targeted for both the retail and industrial markets (SCAN March 90). The plan was to also offer the 7860 technology to original equipment manufacturers through NCR's Technical Marketing Division, based in Ithaca, NY.

SCAN has learned that no 7860 hand-held scanners have been sold so far, and that the product is now on hold. According to a company spokesman, units are still out on field tests, including some at customers' sites to "validate the process." The NCR representative added: "NCR has not yet decided on how to reply to Symbol Technologies' suit on patent infringement. We are still waiting for our lawyers' blessing -- it's tough to get straight answers."

SCAN queried NCR as to why their Technical Marketing Division is preparing to sell the 7860 technology and parts to the OEMs (to integrate into their own systems) while the patent suit is still pending. The reply was: "We have no fear of litigation on OEM sales because we are selling components only. We do not expect these OEM's to be assembling hand-helds. In any case, in its standard contract, NCR agrees to defend any customer against patent infringement."

While that response may not seem to be too clear or forthcoming, it probably accurately reflects the confusion regarding the status of this product within the company. If the legal situation does clear up, the marketing people say that they expect to roll out the product this fall.

The skepticism, in some circles....

...directed at the published data on the phenomenal growth of retail scanning in Japan, reached a crescendo this past year. In recent years, the International Article Numbering Association (EAN) has reported on scanning proliferation in all member countries, and Japan has totally dominated the statistics. In a recent tabulation issued from Brussels, for example, in mid-1989, there were reported to be 102,000 scanning stores in 32 EAN countries -- and the automated Japanese retailers represented 80% of that total (which does not include the US and Canada).

The Distribution Code Center, part of the Distribution Systems Research Institute in Tokyo, administers the EAN program in Japan (where it is referred to as JAN -- Japanese Article Numbering). DCC has been tracking retail scanning since 1979, when the first systems were installed. Starting from 1983, according to published DCC reports, the growth has been explosive -- almost doubling in many of the 12-month periods. These figures are based upon a survey of POS equipment suppliers taken in March each year:

RETAIL SCANNING INSTALLATIONS IN JAPAN

	<u>No. of Stores</u>	<u>No. of Scanners</u>	<u>Average Scanners Per Store</u>
1983	1,900	4,700	2.5
1984	2,700	7,200	2.7
1985	4,200	12,100	2.9
1986	7,900	29,700	3.8
1987	11,700	40,700	3.5
1988	21,300	64,000	3.0
1989	42,900	119,100	2.8
1990	70,100	183,500	2.6

We contacted Hitomi Sekikawa, Chief Researcher for DCC, in an attempt to better understand the causes for this rapid growth and to ascertain the validity of the data about which we had heard the skeptical comments. What we found out was that DCC now believes that even the impressive data reported above significantly underrates the actual number of automated stores. According to Sekikawa, the more accurate mid-year estimates for 1989 and 1990 would be 80,000 and 110,000 stores, respectively. That would almost double the 1989 figure and be more than 50% greater than the 1990 report!

Asked to explain these sharply inflated figures, she reports: "In Japan, a new consumption tax was introduced as of April, 1989 and has served to make computations at the cash register in-store more complex. For that reason, there was an explosive increase in the demand for POS and it has come to the point where equipment suppliers are unable to keep up with the orders." DCC concluded, therefore, that the data from the equipment vendors were understated, and the organization recalculated their own higher estimates.

There have been a number of other contributing factors which have been advanced to explain the rapid growth in Japan's retail scanning (although not necessarily the inflated estimates). In an article in the April, 1990 issue of OEP (Office Equipment & Products -- an English-language Japanese trade publication), author Mutsuo Fukada of the Distribution Systems Research Institute, describes some of these other reasons for the widespread acceptance of EAN-based POS systems in his country:

"In 1982, every member of the 7-Eleven convenience store chain in Japan adopted a POS system, triggering a full scale diffusion of JAN. In reply to 7-Eleven's action, goods makers started source-marking all of their products....Beginning in 1987 or so when many retailers began adopting POS systems, JAN coding spread to a variety of merchandise groups [including] do-it-yourself products, clothing, sports goods, consumer electronic products, toys, medicines, cosmetics, magazines, records, foodstuffs, automobile parts and supplies, and others....Additionally, department stores and clothing shops which have been partly utilizing OCR systems have begun to adopt JAN source marking."

Just a few more statistics from DCC's Sekikawa:

- The number of scanning stores by category: 140 department stores, 3,357 general merchandise stores, 12,781 supermarkets, 16,440 convenience stores, 1,877 cooperatives, 473 shopping centers, 304 home centers, 28,863 specialty stores, 2,219 general retail shops. [DCC could not provide the corresponding data for the total number of stores in each category. There are MITI (Ministry of International Trade & Industry) estimates, however, that there were 1.62 million retail shops in Japan in 1985 -- with over one million listed in the general category of "specialty stores."]
- The top equipment suppliers (each with more than 1,000 stores) among the 25 vendors surveyed by DCC: Tokyo Electric Co.-20,060; NEC-11,706; Sharp-7,956; Fujitso-7,123; NCR Japan-4,293; Matsushita-3,443; Canon-2,627; Teraoka Seiko-2,332; Mitsubishi-1,951; Nippon Regiphone-1,910; IBM Japan-1,790; Oki Electric-1,534; and Casio-1,017.
- Of the total 184,000 scanning lanes, 80,000 are equipped with fixed scanners and 104,000 with hand-held scanners. (No breakdowns are available as to lasers, CCDs or wands).

#### COMMENT

*Having shed some light on the methods used to arrive at the reported data from Japan, we are still in no position to conclude whether the true figures for 1990 are reflected in the 70,000 stores actually documented by the DCC survey, or the 110,000 extrapolated through informed guesses.*

*We can testify, however, to the fragility of these types of statistics. From 1977 (when SCAN started publication) through 1985, based on data compiled by the Food Marketing Institute, we reported every few months on the number of scanning supermarkets in the US and Canada. This was the most visible, successful and explosive market for bar code scanning in the world and we felt it was important to track the data for our readers.*

Which we dutifully did -- until we discovered that the FMI reports had become totally unreliable. They were based on data submitted each month by the vendors, and many of those vendors were just not handing in accurate information (SCAN May 86).

So, although there is no doubt that retail scanning is fast becoming a way of life in Japan, which is far ahead of any other EAN member-nation, we caution the reporting agencies to double-check their data.

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Telephone 03-494-4073.

### It has been 17 years....

...since the Universal Product Code was introduced (May, 1973), yet only recently have the retailers begun to fully realize the potential marketing power of scanning.

It is not surprising that supermarket operators (who have the longest experience with automated checkout) are leading the way in these innovative ideas. New concepts such as self-service checkouts (SCAN Oct 86; June 87), improved control of shelf allocations, more efficient employee scheduling and reduced "shrinkage" (stealing) can all be traced to scanning.

But one of the most sweeping changes is the move to direct marketing, based on information that can now be accumulated about each customer. It is estimated that the average supermarket shopper spends \$5,000 per year on food -- more than \$200,000 in a lifetime. In spite of these impressive figures, one commentator has noted: "No one even bothers to say thank you." The problem up to now has been that the retailers did not know who to thank or how to reach that shopper.

The basic question comes down to this: "If today's supermarket owner has scanning and computers to tell him what's selling, can he also have scanning and computers to tell him who's buying?" The answer is "Yes" according to *Direct Marketing Magazine* (February, 1990). In a feature article on Retailing, reporter Murray Raphel goes on to say: "Electronic marketing is clearly the tool of the 1990's for supermarkets to do more business."

The key to these new direct marketing concepts by retailers will be the ability to identify and reward customers based on their total expenditures, as well as on their purchases of individual items. The successful new systems, now being offered on an experimental basis by some chains, can be characterized as "passive" (i.e. by using a personalized bar-coded ID card, the customers' purchases are automatically tracked at checkout and then cash and/or merchandise rewards are sent directly to their homes). Contrast these systems with the more "active" programs in which the consumers must clip, save and present cents-off coupons at the checkout counter.

Vendors offering the new type of passive systems include: Advanced Promotion Technologies (Deerfield Beach, FL); Catalina Marketing (Anaheim, CA); Citicorp POS Information Services (Stamford, CT); Dynamic Controls (Manasquan, NJ). Information gathered from consumers usually comprises age, education, income, vocation, ethnic/religious background, lifestyles and other "demographics" or "psychographics" that may impact the family's purchasing decisions.

The implications of this kind of data manipulation and pinpoint marketing are just being realized -- and we anticipate there will be some public opposition. The potential problem is that it will be tempting for the supermarket operators to treat the information itself as a valuable commodity, once it becomes apparent that product manufacturers as well as other non-competitive retailers could effectively use this same intelligence in their promotion programs. Any such uses of this personal data are bound to cause abuses and ultimate conflicts with the individual's perceived rights to privacy.

Just over the horizon are interactive television and the expansion of in-store electronic fund transfer (EFT) facilities -- both of which will provide added data to round out the customers' profiles. The next few years will be a challenge to the marketing ingenuity of the retailers armed with this information about their customers and, as a result, individual consumers will be hard put to hide from the retailers.

#### COMMENT

*We offer a word of caution. If this concept of direct marketing gets out of hand, the backlash may be sharper than expected. There are still problems with the removal of item-pricing because few supermarket operators anticipated either the response of consumer groups or the political mileage this issue would provide to state legislators.*

*If the advantages are perceived to be one-sided, and the information gathered is abused, then the head-on collision between consumers and retailers will be inevitable. [As we may learn, over the next few months during the Senate hearings on Judge David Souter, the right-to-privacy issue is not to be taken lightly.]*

*We recognize that these marketing innovations -- and other advantages we cannot even conceive of as yet -- are a direct result and benefit derived from UPC/EAN scanning. We would hate to see that positive image tarnished.*

#### An interesting new book on auto ID....

....published last month by Van Nostrand Reinhold, asks the question: "How can a small business person [or the production manager for a larger company] decide whether the new technologies are profitable or just a new business toy?"

In the fresh approach taken in his book, *Automatic Identification -- Making it Pay*, author Kevin Sharp (Technical Editor of *ID Systems* magazine) has set out to present the material so as to "allow the average reader to get the information required for a specific application by reading less than 150 pages." Sharp's instructions are to start with the first 4 chapters, which provide a simplified technical explanation of the automatic identification technologies and the economic principles used to justify investments in them.

The reader is then advised to go on to the specific chapter relating to the application under consideration (Material Handling, Manufacturing, Asset Management, Health Care, Process Industries, Personnel Management and Document Tracking). Finally, the reader is directed to the last chapter (Human Factors on Data Collection) and the Appendices for supporting information.

The book is consciously and deliberately written in non-technical language "to assure thorough comprehension." As described in a Foreword by Dr. James Fales of Ohio University (well-known in the industry as a leader of AIM's Teacher's Institute program): "Books written by engineers, full of technical jargon, are sometimes treated with suspicion by non-engineering readers. You need not worry about this book in that regard. This book is technically correct without all the technical jargon."

In our review last year of Roger Palmer's *The Bar Code Book* (SCAN March 89), we noted that his approach was not "to educate or convince user-management personnel to undertake bar coding systems." Palmer wanted his efforts to comprise a "comprehensive source book on the theory and design of bar codes and bar code printing." By contrast, Sharp's approach is to unequivocally undertake to educate that user-manager.

This is a good effort and deserves a place in the growing library of texts available for auto ID. Technically, the book does not break any new ground, but it makes no claims in that direction. Instead, it consolidates enough information in one place for a layman to understand the principles, speak the language and make a more informed decision about automatic identification. As a suggestion, it might be a good primer for systems integrators to give to potential customers.

Van Nostrand Reinhold, 7625 Empire Dr., Florence, KY 41042.

#### Our warmest congratulations....

....to *Automatic ID News* on just completing its fifth successful year. Publisher Doug Edgell and Editor Mark David and his staff have put together an excellent and memorable 5 Year Anniversary Issue (July 1990).

This special edition of the magazine marked the event with guest articles written by executives from 15 of the leading companies in the industry (from ATC to Zebra). In a personal essay, Edgell reminisced about how he was inspired to start the publication, while on a flight to Chicago, when he read an article in the *Wall Street Journal*, which began: "Bar Codes will soon be appearing on everything from hospital patients to hand grenades." Seven months later, the first issue of his new magazine was in the mail.

We particularly enjoyed the profiles of the eight prominent leaders selected from both the vendor and the user sides of the industry. The vendors included David Allais (ex-Intermec, now with his own consulting company, Allais & Associates), David Collins (ex-Computer Identics, now with his own consulting company, Data Capture Institute) and Ben Nelson (Scanmark/Markem).

It was gratifying to note that all five of the chosen users were recipients of the *SCAN Newsletter*/AIM Percival Award: Mike Noll (DOD) - 1982; Eric Brodheim (NY Blood Bank) - 1985; Allan Gilligan (Bell Labs) - 1986; Jack Loeffler (Ford) - 1988; and Karen Longe (American Hospital Association) - 1989. We are very pleased that these individuals continue to receive the recognition they so richly deserve.

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