



newsletter

Ltd.

The management
Newsletter for all
industries involved
with bar-code
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related
technologies.

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Indications are surfacing....

....that significant changes may be taking place in the hand-held bar code scanner product group -- the category that includes wands, CCD's and laser guns (helium-neon and diode).

SCAN Newsletter has learned that NCR Corp. has developed and will manufacture a new omnidirectional hand-held laser (diode) scanner, identified as their Model 7860. According to the company, this will be the first hand-held device with the capability (similar to the retail slot scanner) to decode the UPC/EAN symbol without the need to position or orient the bar code to the scanner beam. NCR is targeting the retail market, but has been testing the 7860 for industrial applications, as well. [Presumably, if the symbol height-to-width aspect ratios are maintained, this device will be able to scan -- omnidirectionally -- Code 39, I 2/5 and other symbologies, in addition to UPC/EAN.]

There are interesting sidelights to this new NCR product:

- Although the front-end systems manufacturers (IBM, NCR, ICL/Datachecker, Fujitsu and others) have generally offered hand-helds as a data entry option with their systems, NCR's 7860 is the first to be manufactured by one of these companies.
- Representatives of NCR monitored last year's patent suit brought by Symbol Technologies against Opticon (SCAN May 89) on which there is still no decision by Judge Kimba Wood. Although we are not privy to the recommendations of the NCR lawyers who sat in at the trial, the obvious conclusion is that they found no reason to delay the introduction of their product.
- SCAN has also learned that Spectra Physics turned down an NCR offer to purchase Spectra's license from Symbol Technologies to produce hand-held laser scanners under Symbol's patents (SCAN March 89).

NCR will introduce their Model 7860 at the Quick Response '90 conference in Dallas later this month. No price has as yet been announced, but an NCR spokesman did state that the new device would be competitive to Symbol's most popular retail scanner, the Model LS 2000.



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INCLUDING THE INTERNATIONAL EDITION

Turning to another hand-held product type, CCD (charge-coupled-device) scanners may be gaining a more substantial foothold among US retailers. As we've noted before (SCAN Feb 89), these hand-helds have dominated the market in Europe and the Far East, but they have never been a significant factor in the US retail market. However, according to Jeremy Metz, President of Barcode Industries/US, this situation is changing.

To make his point, Metz cites some specific sales to large retailers who have recently opted for CCD's: May Department Stores (Hechts, Filene's, May's) bought an initial 5,000 Panasonic CCD's and are expected to increase their order to 10,000; Dayton-Hudson stores purchased 2,000 units from Opticon [May and Dayton-Hudson are among the top 6 non-food retail chains in the US.]; Claire's Stores (popular priced jewelry boutiques) installed 1,400 CCD's from Barcode; and Kinney Shoes is now in the process of selecting a vendor for 2,000 CCD's they will install later this year.

According to Metz: "CCD's are the product of the future and will make significant inroads into the US market." His personal estimate is that 20,000 CCD's were sold in the US in 1989 -- up from 10,000 in 1988 -- and that this quantity will double again in 1990. He predicts that the 1990 figure will approach 10% of the US laser gun market.

Metz further noted that as competition for hand-held scanners for the retail market has increased, prices for all types of units have come down. The price differential for large quantity orders, he says, has dropped to less than \$150 (\$300 for CCD's vs. mid-\$400 for the laser guns). In the past, Metz maintains, the major CCD selling advantage was price (at a time when the difference between the two types of unit was more than \$300). Now Metz feels comfortable selling his CCD units based on performance -- ease of handling and high first-read rate.

COMMENT

There are industry forecasts that the retail market for scanners will be approaching its peak in the US within the next few years. Although the large mass merchandisers (like Sears, K mart, Walmart) and the major department stores chains are pretty well committed to the automated front-end systems, there are still millions of check-outs waiting for scanning. From all indications, there is an increasing scramble to nibble away at Symbol Technologies' dominance of the hand-held portion of that market.

As for CCD's, not everyone agrees with Barcode's Metz in his assessment of the potential for that type of unit. Marketing executives at Symbol and NCR, for example, believe that the 10% estimate of market penetration for 1990 is grossly exaggerated. In fact, they say that because of their "superior performance characteristics," laser guns will be giving CCD's some real competition in Europe in the near future.

Looking ahead, beyond retailing, there remains an enormous potential for hand-held devices in manufacturing, warehousing, health and other industries and the players are still jockeying for position. The aggressive entry by NCR and the growing acceptance of CCD's are new factors to be considered.

The potential power of auto ID....

...in retailing was illustrated with the announcement, on February 26, of how Waldenbooks plans to operate its new "Preferred Reader" membership program.

Waldenbooks, the giant bookselling chain (owned by K mart), has 1,300 stores and over \$1 billion in annual sales. Its new venture will target frequent book buyers by offering them discounts and special features, such as purchasing by phone. The program is being viewed as the possible forerunner of a future membership organization to challenge such long-established groups as the Book-of-the-Month Club.

Three years ago, Waldenbooks embarked upon a program to equip all of their stores with front-end scanners. At that time, Harry Hoffman, President and CEO of the company, notified suppliers that they must place the UPC/EAN bar codes on all books and other merchandise sold by the chain. Hoffman recently stated that 600 stores will be scanner-equipped by the end of this year.

The auto ID loop is now being completed with the new membership cards to be given to everyone enrolling as a Preferred Reader. When signing up, the member will be profiled (age, family size, income, annual expenditures on books, type of books preferred and ownership of a VCR or personal computer) and then issued a bar-coded identification card. An updated record will be maintained, by title, of all books purchased. According to Hoffman: "We will be able to pick up the fact that the customer is buying those particular titles....and anytime we want to call up details....we can do it very easily." Individuals can then be targeted with special promotions directed toward those who read mysteries, biographies, historical novels, romance, science fiction and so on.

[We could visualize the scenario going something like this: "Dear Sally Jones: If you enjoyed James Michener's '*Chesapeake*,' which you purchased last summer on July 22, 1989, you'll certainly be enthralled on your vacation this year by '*Alaska*,' his newest book about...."]

Waldenbooks' chief competitor, the B. Dalton chain, is planning a somewhat similar club program for their 800 stores. Dalton will concentrate on giving members a discount, however, and has not yet announced any of the auto ID tie-ins.

Retailers -- particularly food stores -- have been relatively slow to learn how to harness the wealth of significant data that can be captured through front-end scanning. Only during the past few years have there been examples of how merchandising, advertising and promotion programs can be specifically directed to special groups, based on their purchasing history. In the case of Waldenbooks, Hoffman expects to sign up one million members by the end of 1990. Given that size and scope, the project will be an interesting one to follow.

It didn't take much time....

....for Graphic Technologies Inc. to find an investment opportunity for the "deep pockets" of its new parent company. [GTI was acquired last Fall by Nitto Denko, the billion-dollar, diversified Japanese manufacturer of electrical insulating materials (*SCAN* Sept 89, Oct 89).] GTI President Terry Van Der Tuuk called to tell us about his soon-to-be-completed acquisition of Data Document Systems, a manufacturer of shelf labels, which is a subsidiary of Pitney Bowes.

[Pitney Bowes had recently announced its decision to concentrate its efforts on the market it dominates and knows best -- the postal meter business -- and to divest itself of other non-related products. This acquisition by GTI does not include the separate Pitney Bowes Data Document subsidiary that produces business forms.]

Van Der Tuuk can see synergism written all over this deal. GTI (based in Olathe, KS) and DDS (just down the road in Industrial Airport, KS) both produce the same basic product line, i.e. bar-coded shelf labels for retailers. DDS' major market, however, is the supermarket chains, while GTI concentrates on mass merchandisers and drug chains. Van Der Tuuk sees these markets and differentiations as the major factor contributing to the successful merger. (GTI's annual sales are approximately \$30 million; DDS' about \$20 million.) The companies will continue to market their products under their own names -- both of which, Van Der Tuuk decided, are "too well-established and respected to be abandoned."

New products are under development by both companies -- none of which are ready to be disclosed as yet, according to Van Der Tuuk. Although the trade press has drawn a great deal of attention to the new electronic shelf label (ESL), GTI's president maintains that these automated devices are not ready for the market, as yet, because they are still too expensive to buy and maintain. He includes his own AccuChek ESL system, as well as those of others, in this appraisal.

[This assessment could be viewed as a somewhat biased point of view, since the AccuChek has had design and performance difficulties and has been withdrawn from the market (SCAN March 89). Other companies' ESL's seem to be doing reasonably well in a number of test stores.]

Are other acquisitions under consideration for GTI? Van Der Tuuk chuckles, as if to confirm that possibility, but he will reveal nothing of his plans. Meanwhile, GTI/DDS is now the unquestioned leader in retail bar coded shelf marking.

A very pragmatic approach....

....to the bar code scanning industry has been demonstrated by Michael Hone, the President of Photographic Sciences Corporation.

Hone took over as President of PSC two years ago and has successfully turned around its sales and earnings. For 1989, the company posted \$12.2 million in sales with operating earnings of \$208,000 (compared to last year's \$9.3 million sales and a loss of \$181,000). Hone states that there is a good current backlog for PSC's image products (film masters and form slides) and line of equipment (verifiers and scanners).

A new corporate research and development team, led by Jay Eastman (the designer and developer of PSC's handheld scanner line) and staffed with optics and electronics engineers, has been formed to develop new hand-held laser products that are "smaller, faster and cheaper." There is no word, as yet, as to what these new products will be. However, Hone sees one of his company's strengths the ability to capitalize on those market niches for laser guns that are overlooked or considered too small for his giant competitor Symbol Technologies.

Hone is very optimistic about the automatic identification industry, which he feels is now "pausing to take a deep breath, gathering new strength and preparing to break out into new dramatic growth during the coming years." And, of course, he expects that PSC will "keep pace with the industry."

The turnaround continues....

....at Computer Identics, but it's a struggle, as evidenced by the sales and earnings figures for 1989.

Sales for the year were up 21% and the company was barely profitable for the 12-month period -- due primarily to an improved fourth quarter.

<u>COMPUTER IDENTICS</u>	<u>12 Months ended 12/31</u>		<u>3 Months ended 12/31</u>	
	<u>1989</u>	<u>1988</u>	<u>1989</u>	<u>1988</u>
Revenues (\$000)	\$16,235	\$13,372	\$4,381	\$3,612
Net Income (\$000)	108	(1,134)	207	(172)
Net Income/Share	.01	(.13)	.02	(.02)

[We have excluded from the above data the \$1.5 million paid to Computer Identics when Spectra Physics repurchased the manufacturing license for the Symbol Technologies' hand-held laser scanners (SCAN Mar 89). Also excluded was the \$800,000 profit that resulted from that transaction.]

President Frank Wezniak sees the results of the last three months of 1989 as evidence of "progress in becoming a profitable growing company...by focusing our efforts on supplying standard hardware and software solutions, meeting industrial requirements in data collection, and material handling applications." He noted that international revenues have increased as sales and service in Europe have been expanded.

There has been significant progress....

....over the past few months, by the European Committee for Standardization (CEN) to establish bar coding standards for the upcoming European Community (EC-92).

[As a refresher, we will recap the salient points from last year's EC-92 essays that appeared on these pages (SCAN May 89, Dec 89):

CEN is the acronym for the super-national structure made up of the standardization institutes from the 18 EC and EFTA nations which are charged with preparing European specifications. In CEN's first major move on the subject of bar coding, it invited selected organizations to a preliminary Workshop, on September 25-26, 1989, in order to review bar code standards. The Workshop's agenda addressed three areas: EAN product coding; existing symbologies; and applications. The delegates were to review the "generic standards" for new symbologies, reader performance, and the testing and certification of symbols and readers. The conclusions reached by the Workshop were to be in the form of a continuing program to be presented to the CEN Technical Board.]

The two-day September Workshop was held in Brussels, with participants from user industries, vendor-members of AIM/Europe and the EAN organization. As a result of this meeting, a number of important recommendations were submitted to CEN concerning symbology standardization, data and message identifiers, and test specifications and procedures. Based on the proposals, CEN's Technical Board voted to form the Technical Committee on Bar Coding.

Although the Board's charge to this new committee is only a few words long, the scope of its work could have a far-reaching impact on the bar code industry. As presented, the committee's mandate is to implement the following:

"Standardization of bar code symbologies, of a data element architecture, therefore, and of the necessary test specifications. Establishment of an appropriate system of registration authorities, and of means to ensure the necessary maintenance of standards."

This Technical Committee on Bar Coding will draw members from all 18 CEN member national institutes. After studying the recommendations of the September Workshop, the conclusion reached by *SCAN Newsletter* is that the Committee will probably proceed to address the following subjects:

- o Standardization of five symbologies: Codabar, Code 39, Code 128, EAN, and Interleaved 2/5.
- o Evaluation of stacked symbologies to see if any of these newer formats merit formal standardization.
- o Integration of both data element and message structures between bar coding and EDI.
- o Consideration of the need for registration authorities to manage the data elements and message structures.
- o Standardization of test specifications.

The governing Council of AIM/Europe (the auto ID industry's trade association) responded almost immediately by establishing the Industry Standards Committee (ISC). The purpose of the ISC will be to formulate industry policies as they relate to the work of CEN's Technical Committee on Bar Coding.

[The current members of the ISC and their positions with AIM/Europe are: Harry Clark (Kings Town Photocodes), Chairman of the Technical Literature Committee; Michel Jacobeus (Symbol/MSI), Chairman of the Technical Committee; Mark Marriott (Symbol/MSI), Chairman of the Industry Liaison Committee; Paul Chartier (Praxis Consultants), Advisor on Standardization; and Ian Smith, General Secretary.]

We will be monitoring and reporting any significant developments of both the AIM/Europe Industry Standards Committee and CEN's Technical Committee on Bar Coding.

Those wishing to offer suggestions or comments should contact the AIM/Europe Secretariat, The Old Vicarage, Haley Hall, Halifax, W. Yorkshire HX3 6DR, England; phone 422-359161.

A major new effort....

....has been undertaken by the EAN community to convince US-Canadian supermarket operators to upgrade to full UPC/EAN compatibility. This project is being led by President Jean Collins and Secretary-General Etienne Boonet of the Brussels-based International Article Numbering Association/EAN.

The EAN organization has also enlisted a number of US industry leaders to help convince the American retailers to convert to UPC/EAN as quickly as possible. Collins and Boonet have obtained full endorsements from Oliver Jones of Safeway Stores; David Carlson of K mart; Bill Sumner of Bullock's; Tom Brady of NCR; Roger Palmer of Intermec; and Allen Messerli of 3M (Messerli is also a member of the UCC Board of Governors). All of these industry stars are exhorting the store operators to change their front-end scanners as quickly as possible.

The leverage behind the current moves is the recent adoption by the Uniform Code Council of number system characters 6 and 7 (SCAN April 89; Oct 89). As of January, 1990, the UCC has been assigning NSC 7 to all new manufacturers' numbers. According to Collins: "All scanning operators will, therefore, be faced with some degree of equipment upgrading...to read and decode EAN symbols." Boonet goes on to say: "Some 90% of [the North American supermarket] databases continue to be designed for reading 10-digit UPC numbers."

[In the very same EAN publication that contained the remarks of Collins and Boonet, NCR's Brady commented, in a contradictory statement, that the conversion to numbers 6 and 7 "won't be a major operation." "There are few companies which still have systems based on 10 digits," Brady wrote. "Most customers have the number system characters in their host system."]

COMMENT

And therein lies part of the problem. These eminent spokesmen are presenting the US supermarket operators with glib and conflicting reasons about how easy it will be to accomplish the upgrade. They are saying, in effect: "Wouldn't it be great if you did it?"

Unfortunately, no one has been able to come up with a valid economic reason for the retailers to do so. The fact is that almost no products sold in the US supermarkets arrive with the EAN symbols on them at this time. Unless the European suppliers band together and insist they will supply only EAN-marked labels (a most unlikely scenario), we expect that only a handful of civic-minded US chain operators will go along.

It is a shame that the 10-year campaign by Boonet and his colleagues at EAN has gone unheeded. Even though full cost-justification is not readily apparent, the US and Canadian supermarkets should conform to this international standard -- because it is an international standard, because it will facilitate the flow of goods across national borders, and because almost all other US non-food retailers have already accepted and are installing systems with full compatibility.

In spite of all of these reasons, however, we expect that this new effort will have only limited success.

The worldwide schedule

....of auto ID conferences/seminars/expositions for this Spring offers many opportunities for enlightened travel. In chronological sequence, some of the more important events:

<u>TITLE/DATE</u>	<u>VENUE</u>	<u>SPONSORS/ADDRESS/PHONE</u>
• <u>QUICK RESPONSE '90</u> March 20-21	Dallas	AIM/VICS, Pittsburgh, PA; 412/963-8588
• <u>SCAN-HUNGARY</u> April 23-24	Budapest	AIM Europe, Halifax, England; 422-359161
• <u>SCAN-TECH HONG KONG</u> May 7-10	Hong Kong	AIM Int'l with Bus. & Ind. Trade Fairs, Ltd. Wanchai, Hong Kong; 575-6333
• <u>ID EXPO</u> May 15-17	Chicago	ID Systems Magazine with Expocon Mgt. Associates, Trumbull, CT; 203/374-1411
• <u>AUTOMACON/EPOS EUROPE</u> May 29-June 1	Montreux, Switzerland	Automacon with RMDP; Brighton, England; 273-722687
• <u>HIBCC 90</u> June 20-22	Dallas	Health Industry Bus. Comm. Council; Phoenix, AZ; 602/381-1091
• <u>SCAN-TECH UK</u> June 26-28	Birmingham	AIM-UK, Halifax, England 422-359161

There will be lots more in the Fall, highlighted by SCAN-TECH '90 in Atlanta (Oct 2-5) and SCAN-TECH Europe in Messe Frankfurt, W. Germany (Nov 6-8).

The final draft....

....of the US Department of Defense Military Specification on adhesives for pressure-sensitive labels (printed with bar codes) is out for comment.

This specification covers the materials and performance of labels prepared by all "bar code marking technologies," including: Direct Print (defined as conventional print processes such as flexography, offset lithography, letterpress, letterset, silk screen and rotogravure); Dot Matrix Impact; Formed Character Impact; Ion Deposition; Laser Etch; Laser Toner; Photo Composition; Thermal Direct; Thermal Transfer.

Since DOD specifications often become industry standards, it behooves all companies who supply or print pressure-sensitive labels to become more familiar with this document. Final comments are due by March 30, 1990.

When inquiring, refer to Specification MIL-L-61002: Stuart Crouse, Director, AMCPSCC, Attn: SDSTO-TA, Tobyhanna, PA 18466-5097; 717/894-7146.

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