



newsletter

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

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We have always considered....

....it a part of the charter of this Newsletter to attempt to spot trends as they develop. Many of our readers want to know what's coming next month, next year or even further down the road. That was one of our objectives when we attended the Annual Retailer Business and Equipment Exposition sponsored by the National Retail Merchants Association. There were more than 11,000 visitors, 600 exhibitors and 76 educational seminars.

The NRMA has been the last major holdout against bar code scanning (UPC) in the retail sector. This organization, founded in 1911, represents over 45,000 stores distributing \$150 billion in goods and services in the US. These retailers include chains, department stores, mass merchandisers, specialty stores, and independent retailers. In the early 1970's, the NRMA came down 4-square for OCR-A, and has totally rejected UPC as inadequate for their needs. The association developed an enormous program to promote OCR -- and by every objective measure it has failed.

We have been going to the show at the New York Hilton every year for the past 8 years. Initially there were dozens of exhibitors demonstrating systems based on OCR, and seminars telling retailers how to use the system. When Sears adopted OCR over 5 years ago, and spent millions of dollars in equipment, most industry-watchers assumed that would be the push needed to bring everyone aboard.

But it has not happened that way. The Sears experience has not been good; hardware has not come down in price as expected; manufacturers have not been cooperative in source marking; store scanners have been gathering dust under the counters because they didn't perform. And still the NRMA continues to push OCR-A.

But gradually the OCR-A systems began disappearing from the show. Last year there wasn't a single exhibitor of OCR equipment and one or two bar code scanners could be found in the corners of the booths.

This year the dam broke. UPC scanning was featured in every booth selling point-of-sale equipment; Spectra Physics had their own exhibit featuring slot scanners; Symbol Technologies laser guns were being demonstrated in 10 different booths; bar code printers were ubiquitous. Everyone knew that K mart, Wal-mart and F. W. Woolworth had committed to UPC, and there were rumors everywhere about the systems teams from Sears who were checking out bar code scanning.

So if the Bullock's test (SCAN Dec 84; Jan 85) was a straw-in-the-wind, the industry's major showcase exposition is a clear reflection from the crystal ball. If you have something to sell to retailers that is bar code related, it's not too soon to start calling on NRMA members. (A little irony if you will: the theme of this year's exposition was "Focus On The Future").

In another move....

....to broaden its product line to include all elements of bar code scanning systems, Intermec (Lynnwood, WA) has signed a joint marketing agreement with InstaRead (Orlando, FL). Under this agreement InstaRead will develop and supply moving-beam fixed mount laser scanners to Intermec on a private label basis. As with their agreement with Spectra Physics (SCAN Dec 82) to buy that company's laser guns, Intermec has again chosen to go outside the company to purchase an important component, rather than produce their own.

InstaRead was acquired by Rexnord in May 1984 from Control Laser (SCAN Jun 84). The company was formed in May 1983, and reported sales of just under \$1 million for the first 12 months. InstaRead's President Frank Thomas states sales have increased 7 times over the last 2 years, and the Intermec agreement is expected to provide \$3 million in additional business for 1985. Thomas claims that the 5-year Intermec deal "represents a major milestone in the growth of InstaRead. It recognizes us as a number one manufacturer of stationary bar code scanning equipment."

It is still too early....

....to judge its significance, but MSI Data was recently awarded a US patent (No. 4,471,218) covering its Datawand Scanner which includes broad-based claims covering self-contained wand technology. We have not yet studied the full document and its 5 claims, but the Abstract reads as follows:

A self contained, portable data entry terminal positioned within a cordless, wand-type enclosure. Positioned within the enclosure is a bar code optical sensor/emitter, signal conditioning electronics, a microprocessor, a memory, and a rechargeable battery. The bar code optical reader functions as both a sensor and an emitter to permit the readout of data stored in the memory.

MSI's legal department would only say they plan to take "appropriate action" when they complete their evaluation of the patent and any possible infringing product.

Moving right along....

....on their quarter-by-quarter growth, Intermec reports increases of 62% in sales and 63% in net income for the third quarter ended 12/31/84. The company's rapid rate of expansion is being fueled by the \$10.8 million realized from the recently completed stock offering (SCAN Nov 84).

<u>Intermec</u>	<u>3 Months Ended 12/31</u>		<u>9 Months Ended 12/31</u>	
	<u>1984</u>	<u>1983</u>	<u>1984</u>	<u>1983</u>
Revenue (\$000)	11,631	7,200	29,921	18,466
Net Income (\$000)	1,302	796	2,809	1,945
Net Income/Share	.25	.17	.58	.42

Intermec has published an updated new edition of Bar Code Symbology, subtitled, Some Observations On Theory and Practice, by President David Allais. The first edition was published in February 1982 and the new version "corrects previous

errors and provides some new information". Copies are available for \$10 from Intermec, Box 360602, Lynnwood, WA 98046.

Symbol Technologies continues....

....to post significant sales gains, and is hanging on by its fingernails in the black. With second quarter sales up 58% (72% for the 6 months period) the company has posted its second consecutive profitable quarter in its dramatic earnings turnaround. According to President Jerome Swartz, the company should wind up the year with sales in the \$14-18 million range and profitable (although each quarter's earnings may vary).

<u>Symbol Technologies</u>	<u>3 Months Ended 12/31</u>		<u>6 Months Ended 12/31</u>	
	<u>1984</u>	<u>1983</u>	<u>1984</u>	<u>1983</u>
Revenue (\$000)	3,254	2,061	6,168	3,586
Net Income (Loss)(\$000)	75	(440)	113	(658)
Net Income (Loss)/Share	.02	(.15)	.03	(.22)

In a new move to help finance its growth, the company signed a letter of intent on Jan. 8 with Reliance Group Holdings (read that Saul Steinberg) under which a Reliance unit will invest \$10 million in Symbol Technologies through a private placement of equity and debt. Reliance will purchase 666,667 shares of newly issued common stock at \$7.50/share (total \$5 million); and Symbol Technologies will issue Reliance a \$5 million 10-year subordinated debenture and 550,000 5-year warrants at \$9.50/share. (Symbol Technologies' stock promptly moved up to over \$10/share where it sits at this writing).

Under the agreement Symbol Tech agrees to redeem 500,000 existing purchase warrants (which it promptly did, effective 2/1/85), from which, if all warrants are exercised, S/T will realize an additional \$3 million. Swartz places a great deal of emphasis on the significance of the new funds that will be available to the company to finance its growth -- and to the personal commitment by Steinberg who has agreed to serve on the company's board. Financier Steinberg was last in the news when he attempted, and failed very profitably, the takeover of Walt Disney Productions in 1984.

The percentage gains....

....in sales and earnings by Telxon continue to be eye-openers. For the 3 months ended December 31, 1984, sales increased 78%; net income 193%. For the 9 month period, sales were up 69%; and income was reported at 322% over the same period a year earlier.

<u>Telxon</u>	<u>3 Months Ended 12/31</u>		<u>9 Months Ended 12/31</u>	
	<u>1984</u>	<u>1983</u>	<u>1984</u>	<u>1983</u>
Revenue (\$000)	16,629	9,331	44,054	26,082
Net Income (\$000)	1,216	415	3,167	751
Net Income/Share	.25	.08	.65	.16

President Ray Meyo cautions that he does not expect the fourth quarter results to match those percentage increases. The company plans a more level progression of the quarter-to-quarter sales cycle to avoid jamming a disproportionate share of sales and earnings into the fourth quarter of each fiscal year.

And while we are on the subject....

....of positive financial reports, with significant year-to-year gains, witness the second quarter and 6 months results of Imtec (North Springfield, VT). This is the first year of operation as a public company and progress can be measured in multiples:

<u>Imtec</u>	<u>3 Months Ended 12/31</u>		<u>6 Months Ended 12/31</u>	
	<u>1984</u>	<u>1983</u>	<u>1984</u>	<u>1983</u>
Revenue (\$000)	806	269	1,205	523
Net Income (\$000)	86	22	117	12
Net Income/Share	.10	.04	.14	.02

Bruce Smith, who was with Scanmark/Markem for many years, has joined Imtec as VP/Operations. President Jim Williams, who sounded very pleased about Smith joining his company, would not forecast results for the full fiscal year, other than to say they will do "at least as well as the entire industry". (Seems to us he could shut down for the balance of the year and accomplish that.)

The use of machine-readable....

....codes on books is presenting problems worthy of a Solomon-like solution. That it has been working up until now is due to a series of compromises, and to those in the industry who have recognized the need and worked to satisfy it. The subject is now a hot topic under study by the Book Industry Systems Advisory Committee (BISAC). This committee, made up of representatives from the publishing industry, devotes its considerable energies to system automation throughout the industry; i.e., purchase orders, invoicing, data transmission, machine-readable codes.

Within BISAC, the Machine-Readable Coding Sub-Committee, chaired by Sandy Paul (Editor of Electronic Publishing & Bookseller) is charged with developing a solution to this ever-increasing dilemma which shapes up like this:

- For the US and Canadian supermarkets, the current UPC code and symbol for paperbacks includes a 5-digit supplemental code. It incorporates the publisher's UPC manufacturer's number; substitutes the price-point for the product number; and adds the ISBN title number in the 5-digit add-on portion. This was a compromise solution with the supermarkets developed in the mid-1970's. Supermarkets did not want to include in their data files the many hundreds of available titles, with frequent changes, and the required file maintenance that would entail. The supermarkets want to retain this UPC/ISBN coding format, whereby they read only the publisher's code and the price. The wholesalers, distributors and publishers like the idea also since they can scan the entire 15-digit symbol and identify the publisher, price and title when processing returns and redemptions.
- Immediately above (or below) the UPC/ISBN symbol on paperbacks, the full International Standard Book Number (ISBN) appears in OCR-A characters. This compromise was made to accommodate the two major booksellers in the country, Dalton and Walden, who were committed to OCR-A. (ISBN is the universally adopted system for uniquely identifying every book published throughout the world. This 10-digit code includes the language, publisher and title of each book.)

- In other countries, with the approval of the International Article Numbering Association/EAN, a Bookland System has been adopted incorporating the ISBN directly into a standard EAN symbol (no add-on code) for both paperback and hard cover books. This system is great, but it doesn't allow for inclusion of the price in the code, and is therefore not acceptable to the US supermarkets.
- Now here come the mass merchandisers/discounters and other specialty retailers (e.g., K mart, Toys-R-Us) who have adopted UPC and who want to track every title in their stores, but are reluctant to scan the price-points only. The UPC symbol, with the price as product number, will not work for them.
- And immediately over the horizon looms the even larger problem of scanning the hard cover books in the US: many more titles, some with 6-digit title numbers and other complications.

Comment

The original UPC/ISBN format, now appearing on almost all paperbacks, was the right move at the right time, and up to now it has worked for retailers, distributors and publishers. The new wrinkles in product distribution and retailer requirements need new solutions. The Uniform Product Code Council has offered its cooperation if the book industry were to offer a solution compatible with the long-term requirements of the UPCC (more about that in a later issue). The underlying choices facing the book industry in the US and Canada seem to boil down to these basic conflicts: 1. Title coding vs price-point coding. 2. Bar codes vs OCR-A. 3. UPC format vs ISBN/Bookland format.

Each of these problem areas involves special interest groups representing the publishers, distributors, retailers and trade organizations. If you have followed us up to now, and if you have any suggestions: Sandra K. Paul, BISAC, 160 5th Avenue, New York, NY 10010; 212/675-7804.

A round up of

....EAN activities of interest: The Iceland EAN Committee became the 22nd full member of the International EAN Association in December; waiting in the wings are Argentina, Cyprus and Greece, whose membership could be approved early this year.

A specification is being drawn up for an add-on symbol for variable weight despatch units, and discussion continues on the general needs for add-on or additional symbologies.

The ANA, the UK/EAN affiliate, has set up a research fund to investigate the application of symbols to shrink wrap film. Shrink wrapping of outers is prevalent in the UK grocery sector.

It is encouraging to note....

....that retail scanning has continued to grow in the EAN community over the past 9 months. The latest figures from the International Article Numbering Association

EAN show that as of October 84 there were 4773 stores compared with 3511 in Jan/Feb 84, an increase of 1262 stores. Of this increase, 500 new scanning stores were in Japan, which continues to represent over two-thirds of the total EAN installations. Detailed vendor data is not available from Japan, where 2024 out of the total of 3200 scanning stores belong to the Seven-Eleven chain.

The 2 tables below represent our compilation and analysis of the data published periodically by the EAN Association. Table II does not include any of the vendors in Japan, where TEC continues to dominate with the 2000+ Seven-Eleven installations:

Table I - Total EAN Installations

	<u>Scanning Stores</u>		<u>Manufacturer Members</u>	
	<u>Jan/Feb 84</u>	<u>Oct 84</u>	<u>Jan/Feb 84</u>	<u>Oct 84</u>
Japan	2700	3200	4403	7085
France	176	411	1600	2083
Germany	179	281	4589	5455
United Kingdom	87	155	1655	2263
Netherlands	92	132	680	775
Sweden	45	131	466	649
Australia	41	115	988	1143
Belgium	76	113	558	638
Rest of Europe	118	202	3693	5111
Rest of Southern Hemisphere	<u>11</u>	<u>33</u>	<u>510</u>	<u>900</u>
Total	3525	4773	19142	26102

Table II - EAN Vendors As Of October 84
(Installations in Japan are not included)

<u>Vendor</u>	<u>Scanning Stores</u>		<u>Checkouts Per Store</u>
	<u>Number</u>	<u>% Total</u>	
NCR	294	18.7%	7.7
IBM	279	17.7%	9.7
DTS	271	17.2%	5.7
Sweda	208	13.2%	5.1
Nixdorf	140	8.9%	6.6
Hugin	77	4.9%	4.3
Ads Anker	71	4.5%	5.1
TEC	65	4.1%	6.8
Others (34 Vendors)	<u>168</u>	<u>10.8%</u>	NA
Total	1573	100.0%	

There has been a definite increase in the growth rate in Europe but, as Table I shows, this varies from country to country. France and Sweden have had rapid growth but elsewhere the figures are levelling off: Belgium, Germany, The Netherlands. Table I also indicates more manufacturers are getting involved which will increase the levels of source-marked products in the stores. This will, in turn, encourage retailers to install scanners.

Many store groups have moved beyond the pilot stage and we see an increasing number of chains with multiple scanning stores. There is no real indication, as one EAN report suggests, that the gap between the number of UPC and EAN store installations is narrowing. There is little question, however, that a very large potential exists in the constantly expanding EAN member country markets.

The next few months....

....could prove critical for Scantron, the German producer of omnidirectional OCR scanning systems. In 1979 and 1980 this product was heralded by some as a breakthrough which would kill off the emerging EAN bar code system (SCAN Oct 79; Dec 79; Jan 80). The Scantron system was developed by Hans Scholze, backed by research from the Battelle Institute and launched at the 1980 Hanover Fair. When first introduced, the public statements by Scholze were at fever pitch: "zero level of reading errors"; "can handle any print contrast"; "compatible with all cash register terminals". What was referred to as "field testing" by Karstadt, the German department store group, turned out to be a demonstration. (Karstadt now has 33 EAN scanning stores.) There had been a great deal of "hype" 4 years ago at EPoS 80 in the UK, where, with widespread press and conference exposure, Scholze had an opportunity to convince the world. Despite reinforced skepticism at that time, due to inadequate equipment, Scantron continued to be considered by many to be a viable alternative concept to EAN bar code scanning.

A Scantron unit was on show and working at SCAN-TECH Europe 84. We observed a relatively low first time read rate. There are three models in development or production we were told: a basic model at 12,900 DM (\$4,100); a combined OCR and EAN flat bed scanner configuration at 25,000 DM (\$7,900); and an OCR model linked to a robot at 29,000 DM (\$9,200). At present the equipment is very large and a flatter (18cm high) unit is being developed to be launched at the Hanover Fair in April.

Comment

Scantron has been touted as the answer to omnidirectional OCR scanning. The idea has been considered by others and not pursued because they assessed little market demand. A distinction should be drawn between the Scantron approach, and OCR as a technology. Optical character recognition, as such, is still a force to consider in certain sectors. Scantron is a particular method for reading OCR which, it was claimed, would be significantly cheaper than EAN scanning. The current prices and performance do not bear this out.

The AIM/UK '85 conference....

....and exhibition, scheduled for 17-19 April (Novotel Exhibition Center, London) is sub-titled "At last...the complete bar code story!" It is said to be "the most comprehensive exhibition of automatic identification staged under one roof in Britain." So far, 25 exhibitors have confirmed their booking and AIM/UK has received other provisional bookings.

The exhibition will run for 2½ days and the conference is scheduled so that delegates have 12 hours set aside for viewing which do not overlap with any conference sessions. The conference program covers a mixture of trade presentations on the technology interspersed with user presentations. Speakers are

from the UK with the exception of Paul Berge who will talk on present impact, future benefits around the world. User speakers, from large and small organizations, will cover: mail order; electronics; automotive industry; health service; food; manufacturers, suppliers and distributors to the retail sector. Details from AIM (UK) International Secretariat; c/o ISM Limited, The Old Vicarage, Haley Hill, Halifax, West Yorkshire, England HX3 6DR.

There will be over 300 exhibitors....

....at ProMat 85, an international event showcasing productivity as it relates to the handling of materials and the management of inventories. It will take place February 25-28, 1985 in Chicago's McCormick Place. ProMat is the new name for the expanded National Material Handling Show. Emphasis will be on a broader range of exhibitors and attendees from all over the world.

Sponsored by the Material Handling Institute, a series of Material Handling forums will be held concurrent with the exhibition. Automatic identification systems will be featured in both the subject matter of the forums and in the exhibits. Just about every major bar coding company is signed up for what is expected to be the largest trade show ever sponsored by MHI. MHI, 1326 Freeport Road, Pittsburgh, PA 15238; 412/782-1624.

The retirement of....

....Richard Mindlin as Executive VP of the UPC Council marks a milestone in that organization's management. Mindlin has been serving in that capacity since 1978 when the Board of Governors created a separate managing group to oversee the administration of the UPC program. During that time membership has grown from 6,000 manufacturers to over 28,000, and supermarket installations now number over 11,000 stores from the 600 when he took office. John Strubbe, former Chairman of the Board of Governors, commented "He brought order to a very complicated system of code assignments and maintained the industry's faith in the complete integrity of the system".

Mindlin will be succeeded by Harold Juckett, who joined the Council last year and who will take up the title of Executive VP.

At the final meeting....

....of the ANSI MH 10.8 M Committee, to establish the standard for bar code symbols on unit loads and transport cases (SCAN Jul 83), it was informally agreed that the committees concerned with bar codes and character recognition would work together on a new standard for print quality. Out of this plan, there has emerged a proposal to create a Guideline for Bar Code Print Quality. The scope of this document will be to cover the necessary "specifications and procedures for measuring the quality of printed bar codes read optically."

Coordinating the project will be Charles Biss/Photographic Sciences, from the X3A1 (OCR) Committee; and Allen Gilligan/Bell Labs from the MH 10.8 (bar code) Committee. At the present time the project proposal has been accepted by ANSI, but substantive work has not yet gotten underway.