You had to be there....

....as we were, to sense the excitement of the people involved in a new and pioneering effort in bar code scanning. The Bullocks department store chain, based in Los Angeles, is the first retailer of its kind to break away from the stagnating OCR system and to install UPC scanning (SCAN Apr 84). The National Retail Merchants Association (NRMA) has been recommending OCR systems to its member companies for 10 years, with very limited compliance.

We visited the Sherman Oaks store as the guest of Bill Sumner, Director Management Information Systems. UPC scanning registers had just been installed in the domestics (linens, towels, tablecloths) and shoe departments and they were functioning routinely. Sales personnel who had been in the department for 10 or 15 years had adopted the new system with hardly a blink of the eye.

The scope of the project and the difficulties to be overcome for even such a limited test are mind boggling. The domestics department alone has as many line items (15,000 SKU's) as a complete supermarket. None of them arrived source-marked and every item had to be labeled before being sent up to the selling floor. Labeling is being done in the store's basement (not at the receiving warehouse/ distribution center) using dot matrix label printers. This is still one of the major bottlenecks, as bar code printing seems to be in so many new applications. (Sumner is looking for all the help he can get in this area.) One seemingly insignificant departure from normal practice turns out to be an important factor: because the code number must be entered very accurately for every transaction, and because some labels may not readily scan, Sumner insists that the check digit be printed below the bars in the symbol area. This changes the standard UPC format and requires format changes in the bar code printers (and tends to make the UPC Council a little nervous).

The initial effort does not include Price Look Up (PLU) which is not a major concern at this time. PLU may be virtually impossible to control in an environment where special sales and markdowns occur almost daily. But the printing of sales slips, and the tracking and maintenance of inventory are critical to the efficient operation of a department store. There are about 1 million different items sold in the store including, for example, the vast array of colors and sizes of clothing and accessories, and the myriad varieties of cosmetics and housewares.

The encodation of each of these items into the rigid UPC format, of a 6-digit manufacturer's number plus a 5-digit product number, was always considered a major block to adopting the Universal Product Code by the NRMA and some department store operators. But Sumner and his team have thought this through and demonstrated that the system works. There are already strong positive responses

from merchandise suppliers/manufacturers who understand the advantages, and who are prepared to reduce their longer, more complex numbering systems to the simpler, more easily controlled UPC-structured code.

The operating tests will include slot scanning, wands, hand-held laser guns and fixtured laser scanners. Bullocks offered a cooperative testing arrangement to a number of equipment companies and those who agreed to participate have installed printers, scanners and registers on a loan basis. The learning experience and jump on the market will surely prove to be a bonus for all.

Of course, these are only test departments in one test store of one adventurous store chain. But these efforts are not going unnoticed by the enormous Federated chain, of which Bullocks is a part. Our hats off to Bill Sumner and his staff and to the forward looking management group not afraid to break new ground in the face of their own industry apathy -- and opposition. William Sumner, Bullocks, 800 South Hope Street, Los Angeles, CA 90017; 213/612-5004.

There has been....

....a growing demand for statistical information on the current and forecast size of the bar code scanning industry (SCAN Jan 84). This demand has emanated from suppliers, potential suppliers, users, publications, consultants and venture capitalists -- all wanting to get a handle on how far bar coding has progressed, and how far it will go over the next 10 years. We are aware of some limited proprietary studies completed for individual companies, and of plans for broader-based industry studies by market research companies, but nothing has been available for general distribution.

Now the first industry-wide study has been completed and published by International Resource Development (IRD). We have not yet read the complete 252 page report, but we can quote some revealing and titillating excerpts:

- The study defines the industry as comprised of 4 major segments: retail, industrial, service and governmental.

- Although "the most serious competition to the bar code industry comes from optical character recognition technology...OCR systems are much less reliable,...bar coding technology is usually faster,...(and) finally OCR is an expensive technology." So far, according to the study, no other technology competes seriously with bar coding. In the future, machine vision, and sophisticated pattern recognition will probably eat into the turf claimed by bar coding, but not for 8 to 10 years.

- Major issues of the future include availability of solid state lasers; system integration capabilities of equipment suppliers; and, most important, states the report, the future economic health of the nation -- since bar coding is viewed as falling into the "uncomfortable category between luxury and necessity".

- The retail market segment is estimated at a current (1984) level of $196 million and expected to peak at $450 million in 1988. At that point sales are expected to diminish due to market saturation. (Retail equipment is the only segment in which IRD reports dollar amounts to include adjunct computer equipment, since sales are deemed to be usually made as turnkey systems.)

- The industrial segment will experience the most radical growth, spurred by the Department of Defense, auto and other industry endorsements, and the growth of factory automation. Currently served mostly by smaller companies, the report expects several large companies such as NCR, Hewlett Packard, General Electric, Bell & Howell, and IBM could enter this market. The 1984 size of the industrial segment is pegged at $170 million, with an expected annual growth of 40-60% over the next 3 years. By 1990 annual sales of industrial bar code systems and products are projected at $1 billion.

- The service segment, one of the oldest, represents the greatest range of applications, but is expected to be the slowest in growth. Sales in 1984 are expected to be $56 million.

- The government sector includes only purchases made by the government, and not purchases by industry to conform to government requirements. Purchases for LOGMARS installation are expected to be $140 million in 1984.

- Summing up sales projections for the total bar code market: 1984 - $562 million; 1986 - $1.2 billion; 1988 - $1.6 billion; 1994 - $1.5 billion.

Copies of this report, titled Bar Code Systems And Equipment (#625) cost $1850 and may be obtained from IRD, 6 Prowitt Street, Norwalk, CT 06855; 203/866-7800.

We made it a point....

....for both our US and international editors to attend the first SCAN-TECH Europe 84 convention in Amsterdam on November 6-8. This was, after all, a joint international venture, with initial planning, funding and support from AIM/US, and with management and implementation by Europeans. There were speakers and exhibitors from both sides of the Atlantic and visitors from all over the world. We wanted our readers to get both perspectives.

The success of an undertaking such as this should be measured in the longer term: will there be more educated users and potential users of scanning systems? Did the exhibitors gain a better understanding of their market? Was the ground work laid for future sales? We can't wait that long, however, and so we pass along our immediate impressions for your evaluation.

Comment

From the US vantage point: we believe the show and exhibition might have been held off for another year -- possibly two. Lacking a strong central trade or professional organization to promote and organize such a complicated undertaking may have detracted from its success. Those responsible for actually putting it all together did an amazing and outstanding job, under the circumstances. But it seemed to us that the circumstances were not ready for such an effort. Some of the supplier sales staffs were not sufficiently experienced and knowledgeable of the technology and equipment to adequately handle all of the inquiries; publicity was limited because there were no trade groups involved in sponsorship, and few good lists were available for mailing promotion; the market is not mature enough for many potential users to relate to applications; a sense of urgency was missing because there are no industry organizations or fundamental efforts (such as HIBC, AIAG, LOGMARS) to move into bar codes. We believe that marketing people often look upon trade shows as a quick route to

the marketplace. We also believe the market has a way of telling you when it is ready for such exposure.

And from the UK: there were some who doubted the success of SCAN-TECH Europe 84 as a commercial venture, but the facts speak for themselves. The multilingual conference (English, French and German) attracted nearly 300 delegates; the show, with 56 exhibitors, registered an additional 750 people; over 1,000 people from 23 countries were interested enough to attend one to three days of seminars and exhibits devoted to bar coding and other automatic identification technologies.

The organization and presentation were very professional and the venue was ideal (although a little far from the hotels). SCAN-TECH Europe 84 might be compared with the first SCAN-TECH in America on a numbers basis, although there are some important differences. There was no established AIM organization; there was the issue of venue (a political issue); there was the problem of language and patriotism. These are not weaknesses, just basic truths that required hard work to overcome.

Above all, SCAN-TECH Europe 84 marks a new level of cooperation in the industry, both internationally and on a pan-European level. Paul Berge, the chairman of the organizing committee, has felt that European bar coding business needed a concrete objective, like SCAN-TECH Europe 84, before there could be any hope of working towards the more nebulous goal of an AIM-type of body. He did an outstanding job.

One added note: the first annual SCAN-TECH Europe Industry Achievement Award was presented to Albert Heijn, Chairman of Ahold, the large retail conglomerate ($3 billion) in Holland, with two subsidiary chains in the US. The award, presented jointly by this Newsletter and the conference, was given to Heijn for his pioneering efforts on behalf of the International Article Numbering Association EAN. He has been the chairman and leader of that group since its inception and a Heijn supermarket was one of the first scanning stores in Europe. In his acceptance speech Heijn reiterated his plea for increased efforts for international compatibility of technologies such as bar code scanning -- and in particular, he stressed the importance of acceptance of EAN marked merchandise in the US/UPC environment.

SCAN-TECH Europe 85 is scheduled to be held on November 25-29, 1985 at the same Amsterdam location.

There were a number....

....of interesting exhibits at SCAN-TECH Europe 84, but little in the way of technical breakthroughs. This is not meant critically, since truly innovative products do not occur that often at any trade show.

Stork Graphics demonstrated their on-line scanner which they call The Boss. This is a monitoring device to be mounted on a printing press to check the accuracy of printed bar code labels -- at press speeds. The mounted head on the demonstration model was scanning across the web, verifying 9 rows of bar codes, one at a time, while the press was running at linear speeds of up to 300 meters (about 1,000 feet) per minute. Scanning is done with a strobe-type flash operating at 1,000 times per second, and symbols can be printed at an average spacing of less than 2" (5 cm). There is automatic feedback as to the scanability

of the symbol, whether it meets, or is creeping out of, specification. Adjustments and corrections can be made by the press operator, who can monitor results via a printout. Stork has sold units in Japan, Holland and Germany and tells us they are currently in conversation with Harry Palmer of RJS with a possibility for distribution in the United States. The unit sells for approximately $30,000. Stork Graphics, Postbus 67, 5830 AB Boxmeer, Holland; tel 08855 88321.

Another company at the show, new to us, is offering a film master generator -- Policode CRD -- and a new verification device -- Opticode. Both are produced and marketed by EL-SYS, based in Trieste, Italy. US operations are being established under the name Policrom Screens USA. The film master unit is priced at about $100,000 and is rated to produce UPC film masters at about one per minute. EL-SYS, Via Economo 2, 34100 Trieste, Italy; tel (040) 771171. Policrom, Wayne Avenue and Berkley Street, Philadelphia, PA 19144; 215/842-3671.

Although many exhibitors were regional dealers offering established American and European products, there is real evidence of a core group of European-based manufacturing companies with well developed bar code scanning and printing products. These include; Antonson Machines/Sweden; Barcodat/W. Germany; Barcode Industries/France; Brondi Telefonia/Italy; Codeway/UK; Compu Inc./UK; C.S. Computer/W. Germany; Cotag/UK; Datalogic/Italy; ERGI/W. Germany; F & O Electronic/ W. Germany; I.E.R./France; Kings Town/UK; Peekel/Holland; Saab/Sweden; Swedot/ Sweden; Systel/Italy. We have probably missed a few, but a complete catalog of exhibitors and their products is available from AIM/US, 1326 Freeport Road, Pittsburgh, PA 15238.

It has started out....

....fairly quietly and unobstrusively, but could become a major force in the orderly expansion of a worldwide market for bar code scanning. We are refering to AIM International.

The concept of an international group was initially sponsored by the Automatic Identification Manufacturers, Inc. (AIM, Inc., which we will hereafter refer to as AIM/US). Outgoing President of AIM/US, Ed Andersson, was one of the chief promoters of this concept, and he was selected to coordinate the establishment of the AIM International Council.

The idea was to establish national and regional AIM-affiliated groups throughout the world, bound together under the AIM International Council umbrella. The coordinated efforts of this organization and its affiliates would provide the forum and the testing grounds for the international cooperation that will be so desperately needed as the technology grows across international borders and industry boundaries.

The first group to organize under this aegis was AIM/UK, which was formed in mid-1984, with the assistance and encouragement of AIM/US. The concept from that point on was to form national groups when and if the activity within a country rose to the level that warranted such a step. To take up the slack in those countries not yet ready for their own organization, regional groups were to be formed.

With this as background, an organizational meeting was held on November 8 following SCAN-TECH Europe 84 in Amsterdam. It was attended by 40 company representatives from the various nations. Out of this meeting -- at which time some healthy

discussion took place -- emerged a working committee to lay the ground for the formation of AIM/Europe, the first regional organization. The committee consists of: Paul Berge (Symbol Tech/Belgium); Edouard David (Barcode Industrie/France); Olaf Hiden (Swedot/Sweden); Niklay Karadjov (Systel/Italy); Alain Macaigne (Intermec Systemes/France); Mark Marriott (Numeric Arts/UK); Heinrich Oehlmann (Intermec GMBH/Germany); and N. Van Der Vought (Phillips/Netherland). They are preparing for an organizational meeting to be held sometime in January 1985.

They will surely have to face the problems of how to integrate existing disparate organizations (such as Cobatech/France and VdAs/Germany), and how to suppress natural nationalistic politics and emotions for the general benefit of the industry.

As the bar coding....

....industry grows, one of the more fascinating phenomena to track will be the mergers, acquisitions and divestitures. They reflect successes and failures as well as high stakes gambling on futures.

The acquisition this past month of RJS Enterprises by Signode Corp. (Chicago) probably reflects the latter. RJS will become part of Cintrak, a wholly-owned subsidiary of Signode. Cintrak has been expanding its activities into material handling systems and is looking at bar codes as an important element in this market.

RJS has grown to become an important developer of equipment ever since its fall-ing out with Photographic Sciences three years ago (SCAN Oct 80 -- too involved a story to describe here). During the past few years the company developed and built film master generators which it has placed with licensees throughout the world; and also manufactures and markets a full line of symbol verification equipment.

The most recent RJS development may be the product that most interests Cintrak. It is the new thermal transfer printer -- the ThermaBar 2001 Printer. The unit is programmable, operates at a speed of about 1" per second up to 9" wide, and costs "less than $10,000" (a final price has not yet been announced). Most sig-nificant, according to President Harry Palmer, is the unique internal verifica-tion system tied to the printer. Each symbol is checked as it is printed and the results reported to the operator via printout. If it is out of spec the bar code is stamped "rejected" and the label will be automatically remade. If it is marginal, the system is self-correcting. The unit we saw operating at SCAN-TECH Europe was producing labels to the automotive (AIAG) format.

The final acquisition terms have not been disclosed for publication, but from every indication they were most favorable. Cintrak acquired 49% of RJS now, for a fixed amount of cash; and will acquire the balance in 1987 for a price to be determined based on performance.

We will be hearing more about mergers and acquisitions as this industry expands, as the need for capital grows, and as larger companies find it is cheaper to buy matured products and markets than to develop them.

Some important and positive news....

....from MSI Data:

- MSI, the largest manufacturer of portable data collection systems, has acquired Azurdata (Redmond, WA), one of its smaller competitors. The acquisition price was 45,000 shares of MSI common stock (about $11.00 per share on the American Exchange on November 27), with the possibility of additional shares to be paid in 1986 based on sales. Azurdata is expected to post about $5-6 million in revenues in 1984. MSI intends to integrate most of Azurdata into MSI's existing operations. According to Charles Strauch, MSI's president, Azurdata brings to MSI "application software expertise in route accounting, direct store delivery and store price audit, areas where MSI has not been particularly strong".

- MSI has reached agreement with IBM to act as a Value Added Dealer (VAD) of IBM's Personal Computers -- the PC, XT, AC, PCjr and Portable Computer. These new systems include application program generators that will allow customers to develop custom software for MSI hand-held terminals; communication programs that will allow MSI terminals to send and receive data from IBM-PC's; and a Direct Store Delivery System (DSD) for supermarket retailers. MSI hand-held data collection terminals are designed to gather data via keyboard entry or bar code scanning for later transmission over phone lines to a host computer. MSI's field service organization will also act as a repair agent for the IBM PC's.

Recent interim financial reports....

....of some of the industry's public companies reflect the rapid sales growth of bar code scanning companies:

- The substantial growth of Telxon continues unabated. For the 6 months ended September 30, 1984 the company's sales have increased 64% and profits are 6 times last year's figures.

Telxon	6 months ended Sept. 30	
	1984	1983
Revenues ($000)	$27,425	$16,751
Net Income ($000)	1,951	336
Net Income/Share	.40	.08

The company also reports a strong order rate with a backlog of over $15 million (compared to $10 million at the end of the first quarter, 6/30/84).

- Computer Identics is also reporting very significant gains in sales and profits. For the 9 month period, revenues increased over 90% and income went from a loss of 33¢ per share last year to this year's 11¢ profit.

Computer Identics	9 months ended Sept. 30	
	1984	1983
Revenues ($000)	$6,986	$3,659
Net Income (Loss) ($000)	485	(447)
Net Income (Loss)/Share	.11	(.33)

In a recent interview with President David Collins, he filled in some of the details of the joint venture with Bakaert to form the Belgium-

based Computer Identics N.V. (SCAN Nov 84). Bakaert is making a $1.2 million initial investment in the new company which has plans to set up manufacturing and marketing operations in Belgium with sales offices in France, Germany and the UK. Bakaert is also committed to a five-year on-going support program to establish this European operation. In a separate deal, Bakaert has agreed in principle to purchase 500,000 shares of Computer Identics' stock at about $6.00/share. This will provide an additional infusion of working capital for the Canton, MA company. In order to achieve his stated goal of $100 million in sales by 1990, Collins will obviously need all the capital he can raise -- in addition to his outstanding job of bringing in over $10 million during the past two years.

● Meanwhile Symbol Technologies, for the first quarter F/Y 85, posted an impressive sales gain of over 90%, and squeaked into the profit column.

Symbol Technologies	3 Months Ended Sept. 30	
	1984	1983
Revenues ($000)	$2,914	$1,525
Net Income (Loss) ($000)	38	(219)
Net Income (Loss)/Share	.01	(.07)

● Imtec completed its first full year of operation and has issued its first financial reports for the year ended June 30, and its first quarter F/Y 85. The company went public in July 1984 raising about $600,000. Imtec ended its fiscal year with a significant backlog of over $3 million. Over half of that amount represented a 3-year contract to supply equipment to the government under an IBIS Corp. system-integration contract.

Imtec	Fiscal Year Ended June 30		3 Months Ended September 30	
	1984	1983	1984	1983
Revenues ($000)	$1,062	$554	$399	$254
Net Income (Loss) ($000)	56	(268)	31	(10)
Net Income (Loss)/Share	(.10)	(.72)	.04	(.02)

It is not difficult to see....

....many good applications for bar code slot scanners. They lend themselves to fast, efficient recording of information in many environments.

The most recent entry is from Skan-A-Matic. Their slot scanner uses a visible red LED light source allowing the use of color codes and codes printed with dye or alcohol-based inks. Models are available for high or low density codes and as OEM or plug-in versions. The price is $369 for 1-off with quantity discounts available.

Skan-A-Matic, Box S, Elbridge, NY 13060; 315/689-3961.