



newsletter

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

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Generating bar codes....

....is being accomplished in many ways these days, using many different methods. We are all familiar with dot matrix, ink jet, impact, film masters, lasers -- but how about your common everyday typewriter:

This copy has been prepared using an IBM Selectric II typewriter and a special element. With each stroke the character, and its associated bar code, is typed using a standard keyboard. The full set of characters looks like this:

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	0	^	-	;	□	;	;	/									
>	<	#	\$	%	Δ	&	*	()	•	+	⊖	;	;	;	!	?								

We had not been aware of this until recently, and as yet we have not been able to locate anyone at IBM who knows anything about the decode algorithm (we have not spent the time to work it out ourselves.) Our first contact was through Jim Nevison of LOGMARS Ink (SCAN Apr 84) who had seen it on a letter from Jack Troutman of the University of Texas at Arlington. With a little help from Troutman, we finally tracked it down by contacting the Element Specialist at IBM: Miriam Taggert, 800/426-2468, Ext. 217A. It is designated as Part No. 1167658 and costs about \$20.00 while the supply lasts.

The possibilities are intriguing. We can think of a number of applications, particularly related to internal systems and bar coded documentation, that would benefit from this tool, although, as you can see, the quality leaves something to be desired. We'd like to learn more about this from anyone with additional information.

One major industry sector....

....which is headed toward a commitment to autodiscrimination is the health industry.

When the Health Industry Bar Code (HIBC) Task Force completed its work late in 1983, it seemed as if code 39 would be the only symbol of choice. It was not

initially acknowledged that parts of the health community were committed to UPC. Later, when the full HIBC Council was organized, this issue was fully discussed and both symbologies were incorporated into the standard.

One of the principal proponents of UPC was the National Wholesale Druggists Association (NWDA) whose members include manufacturers of pharmaceutical, toiletry, health and beauty aid, and sundry products. Many of these companies have been including the UPC symbol on their products for years, and watched nervously as the initial HIBC proposal for code 39 was circulated for approval. NWDA persisted in its efforts, however, and ultimately convinced the HIBCC of its position.

Since the NWDA had been advised (by bar code industry specialists) that the technology exists today to automatically read more than one bar code, i.e., autodiscriminate, the association is now moving quickly and decisively to assure its members that they need not maintain separate symbologies and inventories to meet the needs of their various markets. The NWDA Business Committee, in a recent letter, "urges all manufacturer suppliers to...commence source marking all individual item SKU's with the UPC bar code symbol...(and) all shipping cases with the interleaved 2 of 5 code symbol".

Comment

This places the responsibility squarely with the suppliers of bar code printers and readers to supply the health industry with the facilities to handle multiple and interchangeable symbols. Although the technology is available, its full impact on costs and reliability have not yet been determined. Preliminary results of industry studies (not yet released) suggest that misreads increase, and first-read-rates decrease, when autodiscrimination is involved. The trade-offs must be carefully evaluated.

The fearsome specter....

....of symbol proliferation has been raised by a number of industry spokesmen -- most recently Harry Burke and Craig Harmon (SCAN Aug 84). The advantages of standardizing on a limited number of symbologies seems evident to most bar code practitioners.

But there are those who have a different view. Why not introduce special formats with special advantages? Thus code 128 and Codabar have their adherents, and others appear regularly.

In the October 1984 issue of 80 Micro, the magazine for TRS-80 users, the front cover is emblazoned with the subject of the lead article -- Bar Codes. Inside, the author, Davey S. Thorton describes the space-saving advantages of code 128 and Tandycode. Tandycode has been designed, according to the author, to allow up to "100% more code per page" for reading text, data and program listings. The goal was to take up less space than the human-readable characters it replaces.

Although the author admits that the space-saving advantages of these bar codes are partially offset by the reduction in error detection, he obviously believes it's worth it.

If you want to debate it further: Davey Thorton, 8128 Brucar Court, Gaithersburg, MD 20877. (Send us a copy.)

While we are on the subject....

....of symbol proliferation, a new variation of the UPC symbol is now appearing. This one was designed for the can and bottle returns handled by the Envipco machines (SCAN Aug 83). These are the devices, installed in the so-called "bottle states", which refund 5¢ deposits collected on all beer and soft drink purchases. Envipco machines are appearing in supermarkets in New York and most New England states where the state laws have been passed to help clean up the environment.

Some bottlers, however, do not put UPC symbols on the individual containers. They expect their products to be sold only in six-packs and the carriers have the UPC symbols on them available for scanning at checkout. Since the bottles and cans do not have any UPC symbols on them, the returns cannot be automatically handled by the Envipco machines.

These bottlers now plan to print a small 4-digit UPC-type symbol on the bottles and cans. This takes up a lot less label space than the full symbol. It can't be read at the checkout, but Envipco, supported by their scanner manufacturer, Metrologic, has programmed their units to recognize this 4-digit code for returns. It is based on the UPC-D version segment, with start and stop guard bars, a 3-digit code and a check digit. And we've been told that it is working just fine.

From all indications....

....ScanJournal is off to an auspicious start. The first issue of this new quarterly, scheduled for publication in October, will feature Industry Standards, and include a History of Bar Coding by AIM President, Ed Anderssen. All major industry standards will be covered either by the authors of the original standards or the major contributors. AIM Managing Director Bill Hakanson reports over 25 pages of advertising have been reserved, with many advertisers signing up for one year contracts.

ScanJournal Chairman Rick Bushnell (BRT) is now looking ahead to expand the scope of technical coverage for this important publication. Future issues will focus on Systems Overviews and Printing/Verification, and AIM, Inc., the publisher of ScanJournal, is actively seeking articles on these two subjects. (Authors are being offered remuneration for their efforts, by the way.) ScanJournal, 1326 Freeport Road, Pittsburgh, PA 15238; 412/782-1624.

We hadn't heard too much....

....from Identicon since the assets of the company were purchased by Vertex Industries from Ferranti Packard early last year (SCAN May 83). They seem to have been regrouping, and plan to exhibit their products at Scan-Tech '84.

The company has just signed an exclusive distributor agreement with Saab Automation of Sweden, covering the Saab Model EVS 110 Solid State Bar Code Scanner. It will be marketed in the US as the Identicon Model 6050. Saab has been using this unit on their automotive assembly line, and is actively seeking distributorships worldwide.

The unit is based on CCD (charge-coupled-device) camera technology, and is intended for applications in the automatic identification market as a fixed-

position scanner. Identicon has targeted markets and applications involving shipping, warehousing and production assembly lines. The company claims the advantages over laser scanners include no moving parts or laser tubes, reduced maintenance, and no safety warnings. Remote scanning from "a few inches to many feet" is featured. The price is set at about \$4,000, including the decoder, for single units. OEM discounts are available.

Identicon, 23 Carol Street, Clifton, NJ 07014; 201/472-2121.

The final sales and earnings figures....

....for Symbol Technologies F/Y 1984 have been issued. (See SCAN Sep 84 for management's comments and analysis during an exclusive SCAN interview):

<u>Symbol Technologies</u>	<u>Fiscal Year Ended</u>		<u>3 Months Ended</u>	
	<u>6/30/84</u>	<u>6/30/83*</u>	<u>6/30/84</u>	<u>6/30/83</u>
Net Sales (\$000)	\$ 8,675	\$ 3,418	\$ 2,650	\$ 1,492
Net Loss (\$000)	1,525	1,679	283	530
Net Loss/Share	.50	.61	.08	.19

*F/Y 83 was a 10-month fiscal year -- September 1, 1982 to June 30, 1983.

The company recently received an initial order of about 400 of its hand-held LS 7000 laser scanners from Rite-Aid Corporation, the third largest drug chain in the country. Rite-Aid has expressed a commitment to hand-held scanning at the front-end of its stores and, according to VP Martin Binder, they "plan to install some 7,000 hand-held laser scanners in 1,500-2,000 stores by 1988."

Two new additions....

....to the rapidly increasing number of bar code printers are now available:

- Sato Corp. (out of Tokyo, Japan) is now delivering initial samples of its thermal bar code printer Model 4500. According to Dennis Stevens, who runs the US marketing operation, this industrial bar code printer offers flexibility in formatting, and prints UPC, I 2/5, code 39, Codabar and other symbologies. The module size is about .010" (.27 mm), with speeds up to 100 labels per minute, using thermal carbon ribbon and plain paper. Present marketing plans are to sell OEM only with initial pricing at about \$2500. Sato, 1 First Street, Los Altos, CA 94022; 415/948-3911.
- Marsh is about to introduce its second-generation ink jet container coding system for use on conveyor lines at up to 200 fpm. The unit includes microprocessor controlled, user programmable, 48K memory with RS 232 interface. System prices start at about \$5000 and are based on the number of heads and other options. Marsh Stencil Machine Company, Belleville, IL 62222; 618/234-1122.

Hewlett Packard has introduced....

....three new products for bar code scanning:

- A new bar code decoder IC and sapphire-tip digital wand product set, for the OEM market. It is intended to eliminate software development and is aimed at manufacturers of data collection devices such as terminals, personal computers, keyboards and weighing scales. The price is \$245.
- The HBCS-4300 and 4500 metal-case wands for use in industrial environments. The 4300 is for reading a general range of bar codes; the 4500 for high density; both cost \$145.
- HBCS-2200 and 2300 infrared wands with sealed sapphire tips which are priced at \$120 and \$135.

All prices are based on quantities of 25-49 units. Contact your local H-P sales office for these off-the-shelf products.

The integration of the....

....Industrial Code (IC) with the UPC code seems to be completed (SCAN Jul 83). The Industrial Code had been administered by the Distribution Codes Institute (DCI) for products not scanned at retail; i.e., durable or hard goods sold to commercial and industrial users. Both UPC and IC have common origins and exactly the same code format and symbol configuration.

Under the merger agreement, the UPC Council will issue the code numbers and undertake the general administration of the program. The non-retail IC numbers that were issued by DCI all carried the prefix or Number System Characters (NSC) 6 or 7. At the present time, according to Harold Juckett of the UPC Council, retailing scanning checkouts are not programmed to recognize NSC 6 or 7. A study is now underway to explore, with the POS equipment manufacturers, the feasibility to add NSC 6 and 7 but for now, any companies wanting to use the UPC number for retail products must obtain a new number with NSC "0".

The immediate problem is to get the message out to the 15,000 companies who have obtained IC numbers over the past 10 years. Very few are using the numbers in their coding systems -- many seem to have forgotten they even applied for and received such a number from DCI. In July 1984, DCI sent a letter to all registered companies reminding them of their assigned numbers and inviting them to convert to the new UPC system at a nominal conversion fee of \$100. The results have been underwhelming! To date, some 200 companies have responded.

Comment

No one is sure whether the limited response represents lack of interest, lack of education, or rejection of the UPC-IC number as the best way to encode this class of item. There have been many negative comments over the years about the non-feasibility of using the restrictive all-numeric, 11-digit UPC format for hardware and other broad lines of industrial products. Many stock numbering systems used by these companies would be difficult to adapt to a 5-digit product number format.

Our guess is that some opposition will continue. We also speculate that one preprinted form letter and a published guideline will not bring everyone rushing into the fold. Better information, more visibility, improved public relations, and some good application examples would help a great deal. The fact remains that a uniform coding system will bring economic advantages, and is the only direct way to automatic identification.

For your copy of the new UPC Industrial Code Guidelines Manual (May 1984 -- cost \$30.00): UPC Council, 7051 Corporate Way, Dayton, OH 45459-4294; 513/435-3870.

Reflecting the growing....

....and constantly changing impact of UPC bar code scanning on all phases of supermarket operations, there are increased efforts to provide new educational programs for retailers and manufacturers. This is also an acknowledgement that there is a new generation of operating personnel who did not grow up with the early implementation of the UPC system, and who may not be as current as they should be.

Some of the industry trade groups -- and the UPC Council itself -- are undertaking new programs to spread the word. One of the first of these will take place on October 22-23 in Chicago. The Food Marketing Institute (FMI) is sponsoring a Scanning Conference particularly targeted to provide retailers with the information they need to realize more of the soft benefits of scanning. Leading retailers and consultants will give reports on applications, coupon scanning, merchandising (the ScanLab Project developed by General Foods will be explained) and an overall exploration of strategies to increase the use of scanning data.

Over 20 speakers are scheduled to make presentations and conduct workshops.

FMI Education Registrar, 1750 K Street NW, Washington, DC 20006; 202/452-8444.

When we first launched....

....SCAN/INTERNATIONAL EDITION (I/E) just two years ago, we did it tentatively. We offered it to our subscribers as an optional supplement and hoped for the best. With the very rapid growth of bar code scanning throughout the world during the past 24 months, however, it wasn't long before most of our subscribers added the I/E supplement to their subscription orders.

It has also become apparent that, although the US continues its lead in the development, production and application of bar code scanning systems, more and more significant news is coming from abroad.

For those reasons we are merging the two sections into one larger publication. Every subscriber will begin to receive the expanded SCAN Newsletter (including the INTERNATIONAL EDITION) starting next month. There will no longer be any reason to separate news based on its country of origin -- and everyone will be able to keep abreast of the total technology from one source.

One of the reasons we chose next month to start this new format is because it marks the first International Exposition based on bar code scanning. We will thus be able to provide all of our subscribers with full coverage of SCAN/TECH Europe, which takes place in Amsterdam Nov. 6-8.

We are certain you will approve of this significant move.