



newsletter

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

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There are a number of issues, some controversial, ...

....that are being addressed by the Health Industry Bar Code Council (HIBCC):

- After more than a year of operation, there have been comments expressing disappointment that only 110 companies (including over a dozen hospitals) have signed up for their LIC (Labeler Identification Code) numbers. This seems like a small number compared to the many thousands of companies supplying products to hospitals. "Not so!" replies Henry Givray, Executive Director of the HIBCC. "These 110 companies include all of the large suppliers and this group represents 60% of the market share of all products sold to the health care industry." According to Givray, suppliers understand they will eventually have to participate; most are waiting until there are more hospital bar coding installations and until more pressure is brought to bear to source-mark their products. There was a pertinent article (Vendors Face Roadblocks in Bar Code Transitions) in the July, 1985 issue of MPS, a medical trade journal. Reporter Elizabeth Beck opened with "Who goes first -- hospital or vendors? When the subject is health industry bar coding, that question arises frequently. Reason: Material managers see scant few products arriving on docks coded, and manufacturers look for evidence that most of their customers are willing and ready to accept the technology." The article goes on to describe the difficulties in printing the symbol on the variety of health care products, in some cases requiring package redesign.
- The HCPAS (Health Care Providers Application Standard) was lambasted on these pages a few months ago (SCAN May 85) and Givray thinks we "missed the boat." Comments from the people involved in patient care -- the hospital administrators -- have been "uniformly positive" according to Givray and, except for some relatively minor technical changes, the proposed standard is remaining essentially intact and publication is expected by the end of September, 1985.

(Editor's Note:) The strong negative comments we have seen and heard originate with the vendors of bar code equipment, supplies and services -- and according to current indications from Givray, these will have little substantive effect on the final standard. For starters, we refer the HIBCC to vendor comments from Jill Mandeno (KPG); Barbara Armstrong (Data Composition, writing in Computers in Health Care); and Harald Bailey (Circa).

- The three conferences sponsored by HIBCC and held in LA, Chicago and Philadelphia attracted over 700 attendees and were considered successful. The HIBCC plans to continue its communications and educational efforts to reach as many people as possible.

- A group is at work developing HIBCC guidelines and manuals. The work is being completed by industry people and outside consultants.

We are getting health industry feedback from many sources, and it is not always consistent. This is not surprising since health care providers, product vendors, bar code suppliers, independent consultants and bureaucrats all have different interests and perspectives. It would seem foolish, in the meantime, to ignore comments from some of the knowledgeable people from the automatic identification industry.

It is a source....

....of embarrassment to the bar code industry to find a major technical issue -- which has not been properly aired in the industry -- addressed elsewhere. The subject is light sources. In an excellent article marking the 25th anniversary of the laser, the New Scientist (a UK journal) got to the nub of the issue in one short passage: "Not all bar codes have to be read with a laser; other light sources will work in hand-held wands passed over the printed symbol. Semiconductor lasers are increasingly common, but the difference between their infra-red wavelength and the red output of the helium-neon laser could cause problems if care is not taken in color printing of bar codes." The article describes how equipment and the human eye see colors, and even black and whites, depending on the wavelength of the source of light.

It is not our intention to confound our readers with the scientific complexity of this topic, but bear with us for a few technical details. The visible spectrum -- which covers all colors of the rainbow -- extends from wavelengths of 380 to 760 nanometers (nm), and even a few nanometers difference in wavelength can cause significant distortion. Infra-red wavelengths are higher still. The following wavelengths are being used for bar code scanning and the list may be incomplete: 621nm (the precise UPC/EAN peak response), 633nm (helium-neon laser), 660nm, 700nm, 900nm, 905nm, 930nm, 950nm and more recently 820nm (laser diode). So-called white light, visible light or incandescent light reading devices are another can of worms, and differ still more; and the amount of stray ultra violet and infra-red light is not always defined. To add to the confusion, the new laser diode scanners emit a visible red or white light just for the operator to see and to point at the bar code like a gun sight.

COMMENT

It is not possible to play every conceivable tune on the reading side without affecting the symbol printing side. What we see happening is too much uncoordinated flexibility on both sides of the scanning equation. Fundamental laws of physics cannot be altered. It gets right to the core of the entire technology and the specifications which have taken years to establish. Either equipment has to be matched more closely to the industry specifications, or the specs have to be revised. Some new equipment might turn out to be not acceptable in some situations. The bottom line is that it is impossible to have considered flexibility on either the reading side or printing side without severely restricting the other.

The subject may be complex, the issue is straightforward. The bar coding industry has got to pay more attention to this subject, clarify the situation and face up to the need to make symbol printing and reading fully compatible. We have only "turned the stone over" so to speak and we are concerned with what we have seen crawling out.

As we go to press....

....we have just learned that the Uniform Code Council (nee Uniform Product Code Council) has changed the appearance of the sacrosanct UPC symbol. This is the first change in the appearance of the symbol in 12 years -- but before anyone panics, the change is basically cosmetic and not substantive.

As we understand it from the preliminary notice sent out, and from conversation with Sharon Focht of the UCC: the number system character, now centered to the left, will be moved straight down to the bottom line; and the check digit, centered to the right, will be brought down and moved close to the guard bars inside the actual printed symbol area.

The reasons for the changes are primarily to satisfy those retailers (K mart and Toys R Us in particular) who want the check digit printed on all items. Since the UCC was reluctant to force any manufacturers to use more package real estate to print the check digit, the compromise was to move it close to the bars and to "recommend" that it be printed.

We asked, "Why not adopt the EAN solution, which places all 12 characters directly under the symbol inside the guard bars?" The reply was that retailers want to be able to readily isolate and read the number system character and check digit, which the EAN symbol does not do. (We suggest the STAC committee involved take another look and decide where they want to place the crop marks that appear on all UPC film masters.)

This seems to be part of an overall effort to update the specifications and guidelines and to re-educate the manufacturers and retailers as to the proper use of the UPC symbol. One of the participants in this campaign is Pathmark Supermarkets, which has been running full-page four-color ads in the trade journals thanking Proctor & Gamble "for your fast action on UPC symbols." The ad was referring to P&G's "Scan 100 Project" designed to review all printed UPC symbols on their products to achieve a 100% first read rate. (Pathmark has always been one of the leading innovators in scanning implementation -- see article on coupon scanning below.)

Note to other industries: This effort is important to the supermarket industry which was wise to involve their trade organization (UCC) and leading manufacturers and retailers in a joint effort.

When we first reviewed....

....the Coupon Solution, introduced by Catalina Marketing (SCAN May 84, August 84), it was being tested by the Wegmans Food Market chain in Rochester, New York last fall.

This past month the first fully operational system was installed at Boys' Markets in the Los Angeles area. (Wegman's completed the test and discontinued the system.) Ralph's Grocery Company has also contracted for the service and will begin using it in 10 stores in August. Catalina expects about 150 stores to be operational by year-end.

The special couponing system is based on UPC scanning and works like this:

As a shopper's groceries are checked out by the electronic scanner, a computer keeps track of the items. When an item is purchased which is competitive with one from a client who has contracted with Catalina to distribute coupons, a signal is sent to a small printer at the check stand and a Checkout Coupon for Catalina's client is printed immediately. After the purchases are totalled, the coupons are handed directly to the shopper.

For example, a manufacturer of cat food will contract with Catalina to target coupon distribution only to purchasers of a competitive brand of cat food, or can even choose to include buyers of cat litter. The advantage is in putting coupons directly in the hands of those people the manufacturer wants to reach.

Just to give our readers some idea of the overall size of the coupon market: in 1984 each of the 80 million US households received 2,000 coupons and 84% of these households redeemed a total of 6 billion of these coupons worth \$1.6 billion. (I'll wait a minute for you to digest those numbers -- Congress may want to look into some scheme whereby their families could collect enough coupons to help eliminate the federal budget deficit.)

Anyway -- Catalina has signed up 16 product manufacturers representing 38 product categories for their services. These manufacturers will presumably be happy because the redemption rates have tested very high; and the retailers shouldn't object to the fees they will receive for each coupon issued.

If the service proves successful, it should put a dent in the coupon fraud problem -- although general coupon scanning at check-outs can reduce that problem even faster. As you may have noticed, more and more of the coupons that appear in your mailbox and in your Wednesday and Sunday papers have the UPC bar code on them. About 40 manufacturers are now placing symbols on their coupons. Pathmark has 2 of its stores testing various software packages designed to scan all coupons at check-out. This is the broad-based type of system that can be used by any scanning stores to speed up coupon redemption and help eliminate coupon fraud. The POS equipment vendors have not pursued this application as aggressively as we would have hoped or expected.

Catalina Marketing, 3807 Wilshire Blvd., Los Angeles, CA 90010; 213/380-6865

The domain of the EAN system....

....now extends to 30 countries. In New Zealand at the last EAN General Assembly, Brazil, Papua New Guinea and Taiwan were formally accepted as members. Earlier this year (SCAN Feb 85) Argentina, Cyprus and Greece became affiliates. The organization does not believe that further territorial expansion is limited. The EAN New Members Working Party will develop promotional activities for exporting manufacturers in non-member countries to source mark products and to canvass for new member organizations.

With nearly 200 sovereign states in the world, the International EAN Association still has some way to go. The capacity exists in the system for every consumer product in the world to carry an EAN/UPC bar code!

The EAN Council Meeting....

....was not the only bar code scanning activity taking place in the Southern Hemisphere:

- A conference and exhibition held in Auckland in June was hosted by the New Zealand Product Number Association (NZPNA). This in itself is not unusual, but the conference title "Bar Coding and Scanning Technology Seminar" indicates the increasing interest in the uses of bar coding for non-retail purposes. The target audience was managers in the manufacturing, wholesaling and processing industries. The international speakers were David Allais/Intermec; Paul Berge/Symbol Technologies Int'l; Tony Codd/Leigh-Mardon Graphics; Ron Clements/IBM Australia. The show, with 15 exhibitors, was well attended.
- The South African magazine Supermarket & Retailer recently featured a story on the Pick 'n Pay retail chain with outlets in South Africa and Australia. The Aspley hypermarket in Brisbane, Australia is the first store in the group to install scanning across the full product range. With 75 NCR scanning checkouts, the store is possibly the largest single retail scanning operation in the world. Pick 'n Pay's systems development department, based in South Africa, developed the administrative support system to the Australian store. The company's attitude to item pricing has been cautious. When the store first opened, with all 75 scanners zapping away, all stock was individually priced and shelf edge price labels were used throughout the store. Gradually price marking of groceries has been phased out, but Pick 'n Pay boasts a secure price administration system, which has a strictly policed audit trail.
- Property dealings in New South Wales, Australia must be registered with the Australian Registrar General's office (RGO). The RGO handles 2500 transactions each day either to register new dealings or requests for information. A new micrographic system which features bar coding scanning -- claimed to be a world first -- eliminates most of the documents. The complete system, using Symbol Technologies equipment, was supplied by Barcode Technology Pty. Ltd., PO Box 248, Enfield, NSW 2136, Australia; Australian 'phone (02) 747 2244. The Kodak Company was impressed enough with the system to award the RGO the international McArthur award for the most innovative use of micrographics.

It is difficult....

....in this day and age to sustain rapid growth in sales -- along with increases in inventory, receivables and overhead -- without fresh infusions of capital.

For the first quarter of fiscal year '86, Telxon continued to post substantial sales gains (37%) and advances in income (42%); and has registered with the SEC to sell an additional 1 million snares of stock. (There are currently 7.6 million shares outstanding.)

<u>TELXON</u>	<u>3 months ended 6/30</u>	
	<u>1985</u>	<u>1984</u>
Revenues (\$000)	17,758	12,964
Net Income (\$000)	1,204	845
Net Income/Share	.16	.12

Telxon's recent stock price (NASDAQ 7/31/85) was \$17. The stock offering is being underwritten by Rothschild, Unterberg, Towbin; Kidder Peabody; and McDonald & Company.

With a 36% increase....

....in sales, but an 11% decrease in earnings for the first quarter of fiscal year '86, Intermec explains that it is emphasizing long-term growth objectives. As a result, President David Allais told shareholders at the company's annual meeting, expenses for R&D were up 85%, marketing up 63% and fixed manufacturing costs up 44%. These increased costs were also expected to keep second quarter earnings below last year -- but Allais predicts vigorous growth in the second half of the fiscal year when new products are expected to start showing results.

<u>INTERMEC</u>	<u>3 months ended 6/30</u>	
	<u>1985</u>	<u>1984</u>
Revenues (\$000)	10,910	8,045
Net Income (\$000)	503	565
Net Income/Share	.09	.12

The larger 33% drop in earnings per share reflects the 18% additional shares of stock issued since 6/30/84. Looking at these results, Allais comments, "We regard a couple of quarters of slightly lower profitability as simply part of the investment necessary for Intermec to achieve solid, long-term growth and maintain our leadership in this vibrant, emerging industry."

The company used the annual meeting as a launching pad for its newest product, the Model 8636AT TURBO thermal printer for the automotive market. The company claims it is 3 times faster than its previous thermal printers and provides exceptional print quality. The unit costs \$5,495 and has a output of 400-600 labels per hour.

Intermec, Box 36062, Lynnwood, WA 98046-9702; 206/348-2600.

For those who are....

....maintaining an up-to-date library on the literature published by Harry Burke, his latest offering is titled Bar Code Standards.

In this essay, Burke takes off after the standards being written and the "standardizing committees" (who are writing them). Their efforts, he claims, are being compromised in an attempt to reach some common ground on which everyone can grab a foothold. He sees the goal of any standards committee as "to maximize the potential of bar code technology and to minimize its cost."

In this treatise, Burke reviews (and comments on): continuous codes (get rid of them); 4 bar width vs. 2 bar width coding schemes (use 2 bar widths only); infrared (do not require its use); intercharacter gap (do not reduce to .040"); bar width ratio (stay with 3:1 code 39, and 2, 3, 4:1 UPC); and tolerance (standardize on $\pm 25\%$ regardless of the "X" dimension).

His overview of all printing methods, present and future, provides a good perspective in an area too often ignored in an industry totally dependent on the quality of the printed image. For those industries with committees involved in establishing standards for bar coding, this is good reading. You will probably not agree with all that Burke has written, but you should not ignore the issues he raises.

As usual, a note or phone call will probably get you a copy.

Harry Burke, NCR/Data Pathing Division, 752 San Aleso Avenue, Sunnyvale, CA 94086; 408/734-0100.

One of the hottest....

....applications for bar code labeling and systems is the printed circuit board (PCB) industry, and a number of companies have been marketing specialized printed labels for this use. Computype, Data Composition, Markem, and York Tape and Label all offer the required high density, wide variety, excellent quality bar coded labels required. Others, such as Intermec, are selling on-demand printers for this same application. The ability to affix uniquely numbered bar code labels to each PCB in order to trace it through all quality control steps, including processing at high temperatures, offers many advantages in an industry where zero defects is a constant goal.

Computype offers an information sheet: Computype, 2285 West County Road C, St. Paul, MI 55113; 800/328-0852.

York has a new brochure on the subject: York Tape and Label, Box 1309, York, PA 17405; 717/846-4840.

The name itself....

....first caught our attention and, on deeper investigation, it looks as if the Zenwand-71 is a product with a difference. Described as a hand-held laser bar code system, the product combines with the Hewlett-Packard HP-71B hand-held computer and the HP CS-2200 digital wand through an interface designed by Zengrange. The interface -- both hardware and software -- provides validation and editing facilities and 25 bar code orientated program instructions. The ROM decoder can handle Code 39, 2 of 5, Interleaved 2 of 5, Code 11, Codabar, EAN/UPC. The Zenwand-71 also autodiscriminates. Two-way inter-computer communication is provided via HP-IL or RS 232C interfaces.

The Zenwand-71 is being marketed as a data collection storage and processing system, with powerful interaction facilities at the point of data capture. The one-off price starts at about £1000 (\$1400). The Zenwand-71 is available from Zengrange Ltd., Greenfield Road, Leeds LS9 8DB, West Yorkshire, England; UK 'phone: (0532) 489048; telex: 557621 ZEN G.

Designed to fit....

....a variety of work stations, the new Polyedit is a programmable label designing and printing system. Product Flow Systems markets Polyedit in the US (the unit is manufactured in France by Industrial Systems). It comes complete with standard software for producing labels with numbers, letters, symbols and most bar codes including UPC, LOGMARS, AIAG and HIBC. Label dimensions range from 1/2" square to 4.3" x 12". The printer is a dot matrix type; the price of the unit is \$9,000.

A newer model, called the ETITRONIC, includes a label applicator, and will be available soon. It will be priced at \$13,500, and the company expects to assemble it in the US.

Product Flow Systems, 821 Bethlehem Pike, Philadelphia, PA 19118; 215/233-5130.

Resuming their very successful....

....series of seminars, the Automotive Industry Action Group (AIAG) has scheduled two new seminars on bar coding and automatic identification. Titled The Codes are Coming, the AIAG literature explicitly states, "Mandatory implementation is coming -- be prepared!" What automotive suppliers could resist that? In addition to the educational presentations, these one day conferences feature exhibits by 50 companies from the bar code industry displaying their wares.

Chicago's Ramada/O'Hare on September 24; Fairlane Manor in Dearborn, MI on October 17. Registration fee includes all admissions, lunch, coffee breaks and a cocktail, and has got to be the biggest bargain around at \$60 for AIAG members; \$90 for non-members. All administrative details are handled by the Economic Development Corp. of Wayne County, Suite 715W, 1 Park Lane Boulevard, Dearborn, MI 48126; 313/336-3306.

Because the seminar....

....on bar coding held on June 19 and 20 at the University of Wisconsin was so oversubscribed, a repeat program is being offered on October 7 and 8, 1985.

Titled Using Bar Codes in Warehousing and Distribution, the sessions include: History and Theory of Bar Code Technology; Bar Code Reading Equipment; Batch Portable Data Entry Terminals; Demand Printing Systems; Direct Printing of Bar Codes on Corrugated Containers; Automatic Label Applicators and Print/Apply Systems; Wireless On-Line Data Entry Terminals.

For more information contact the co-sponsors of the two day event:

Ed Marien, University of Wisconsin Extension Management Institute, 608/262-9791; or Craig Harmon, Q.E.D. Systems, 319/377-2518.

Wakefield Software Systems, Inc. (WSSI)....

....recently received a \$250,000 equity investment from Massachusetts Technology Development Corporation (MTDC). WSSI is a producer of turnkey bar code data collection systems, with a large domestic installed base of systems in the manufacturing industry. WSSI currently numbers among its clients: TRW, Gillette, Westinghouse and USCI-Division of C.R. Bard.

Wakefield will use the MTDC funding for market development, capital equipment, and the completion of a major R&D project. MTDC is an independent public agency which provides venture capital financing to new and expanding technology-based companies in Massachusetts.

WSSI, 400 West Cummings Park, Suite 4900, Woburn, MA 01891; 617/935-7920.