



# DATA CAPTURE Report

Since 1977, the premiere management & marketing newsletter of automatic data capture: Bar Coding, RF and related technologies

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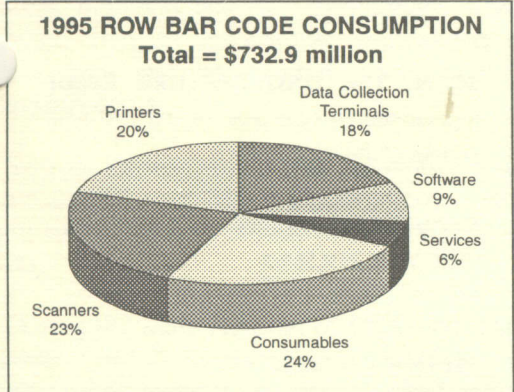
## DID YOU KNOW?

### UPC CODE UBIQUITOUS

Nearly 200,000 North American organizations and their trading partners in over 100 countries now use the Universal Product Code (UPC) for product and shipping container identification. Another 50,000 companies use the compatible European or International Article Numbering (EAN) bar code. (The Uniform Code Council (UCC), Dayton, OH, (513) 435-3870.) □

### RAPID GROWTH IN THE GLOBAL BAR CODE MARKET

Bar code vendors will be targeting markets outside Europe and North America ('Rest-of-world' or ROW) with many new products in 1996 and 1997. The flurry of new offerings is in response to the growing demand and increasing sophistication of the ROW markets.



According to Venture Development Corporation (VDC) (Natick, MA - PH (508) 653-9000), bar code vendors are considering the ROW market "one of the top two or three strategic priorities" in 1996 and 1997. VDC estimates ROW bar code market consumption was \$732.9 million in 1995. Consumption is forecasted to grow 23.2% per year through 2000, resulting in a market valued at more than \$2 billion. □

## SCAN Newsletter & The DATA CAPTURE Report Merge

With this Charter Issue, SCAN: The DATA CAPTURE Report brings a new and expanded perspective to the automatic data capture (ADC) industry. SCAN/DCR is the product of the merger of SCAN Newsletter and the recently formed Data Capture Report.

During the past nineteen years — encompassing two-hundred-and-twenty-three monthly issues — SCAN Newsletter tracked the industry's growth and examined the companies and individuals that made it happen. The experience acquired from that coverage provides the bedrock foundation for SCAN/DCR.

Even though automatic identification was still in its infancy in September 1977, the Charter Issue of SCAN Newsletter provided an inkling of the future:

"Bar code scanning...is happening all around us. Systems are operational in manufacturing, warehousing, distribution, retailing, hospitals, libraries, research and government operations."

In those days, automatic identification (the term "automatic data capture" had not yet been coined) meant just bar code scanning, performed with the only codes that were available for applications: UPC, Code 39 and I 2/5. The news in that first issue was significant, nevertheless: The US government had just initiated its seminal LOGMARS program; Europe was poised to implement EAN (its version of UPC); and industry groups were debating the most suitable coding scheme for transport packages.

A number of small companies were vying for market position in 1977 in sectors other than grocery retailing. Some of these companies survived into the 90s; others never made it beyond a few product introductions. (How many readers remember companies like Ames, Identicon, Informer, MRC, Skan-A-Matic, Mekontrol, Information Products Systems, Halm Industries and Azurdata?)

Today, the ADC vistas have grown beyond linear bar coding to include radio frequency identification (RFID), radio frequency data communication (RFDC), voice recognition, magnetic stripe, smart cards, optical character recognition, machine vision and, of course, two-dimensional bar codes.

Such a global industry — projected to grow to more than \$10 billion per year by the end of this decade — warrants the expanded, worldwide coverage that SCAN/DCR will now provide:

● SCAN/DCR will add new features which highlight the plans and accomplishments of the industry's most important established manufacturers, resellers and corporate leaders - - and the potential achievements of promising newcomers.

● SCAN/DCR will conduct in-depth financial analyses, including the views of the best Wall Street gurus who follow ADC.

● SCAN/DCR will cover significant improvements in the technology, as well as the new challenges to marketing those changes.

With SCAN/DCR's new bi-weekly frequency, readers will learn about important developments much faster, often within days after they occur. Here are some examples of the ongoing stories SCAN/DCR will be tracking during the first few months:

● How will the current patent/anti-trust battle between Symbol Technologies and PSC affect the future of those companies, in addition to the distribution and pricing of all hand-held laser scanners?

● When will Norand emerge from its recent problems which included fraud in its Italian subsidiary and delays in bringing its new products to the market?

● Will the increased aggressiveness of Eltron and Monarch Marking challenge Zebra's leadership in bar code printers?

● Which applications will help fuel the growth of ADC into the next century: Healthcare? RFID (e.g., automated toll collection, small animal ID)? Personal identification media (e.g., smart cards, photo IDs)? Shop floor and warehouse automation? Transportation?

● How will the conflicting interests and egos of various national bodies and trade groups be reconciled to produce meaningful international standards?

● Will we see more European and Asian manufacturers emerge to challenge the American dominance of ADC?

● How will the world respond to the "privacy" issues that will arise as ADC becomes more invasive and pervasive?

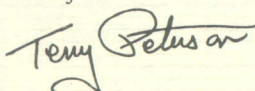
● Will last year's torrid pace of corporate mergers and IPOs continue? Have the results been successful? Who are the next candidates?

● How will the volatile trade show competition between Reed's SCAN-TECH and Advanstar's ID Expo be resolved? Will they both survive?

Equally important, SCAN/DCR is "wired-in" to all of the ADC newsmakers, so its staff will be able to bring you immediate reports and analyses of unforeseen and unpredictable events — including information that never appears in the trade, financial or general press.

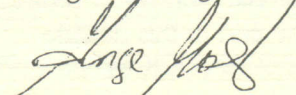
We are pleased that you will join us on the continuing, exciting adventure of automatic data capture. Welcome to SCAN/DCR.

Terry Peterson



Publisher

George Goldberg



Contributing Editor

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# Symbol vs. PSC

- by George Goldberg

Any lingering hope that the current Symbol Technologies/PSC fracas would be negotiated to an amicable solution was dashed on April 1, when the companies filed suits against each other.

On January 4, 1996, PSC announced that it had unilaterally "terminated talks with Symbol Technologies concerning the companies' respective intellectual property rights and positions for laser bar code reading devices."

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## **On April 1, Symbol filed suit alleging that "PSC products infringe at least 19 patents held by Symbol Technologies."**

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PSC has been a licensee under Symbol's patents on hand-held laser scanners and miniaturized scan engines since 1991 (SCAN Jun 90, Jul 90, Sep 90, Apr 91). The current dispute centers around PSC's new miniature scan engine (Model DI-1000), which PSC maintains does not fall under its licensing agreements with Symbol. The new scanner's design has the laser diode mounted on a moving mirror, and this entire assembly is swept to directly illuminate the bar code.

PSC had been quietly showing the DI-1000 to selected OEM and reseller customers last summer. In August, discussions began with Symbol concerning possible patent and licensing issues. These talks covered the existing agreements between the two companies, whether this new device changed any contract stipulations, and whether a new agreement was needed in view of PSC's DI product developments.

Symbol insisted that it had developed and patented this so-called DI — or "direct illumination" — technology in the late 1980s, but had chosen not to utilize it on its own products.

During the early Autumn of 1995, according to representatives from both companies, additional meetings were held and discussions proceeded, albeit with some difficulty. In late October, a generally-worded, interim document — which described the basic areas of agreement — was signed by both companies. (Symbol refers to this paper as a "Letter of Intent.")

Attorneys from both sides then took over to draw up the final contracts. Symbol's first draft of the agreement was totally rejected by PSC as "too extreme"; PSC's counter-version was deemed "not acceptable" by Symbol. By mid-December, the parties were further apart than ever. Two weeks later, PSC broke off negotiations.

Both companies then decided to take their dispute to court. On April 1, in New York City, Symbol filed suit in the US District Court for the Southern District of New York alleging that "PSC products infringe at least 19 patents held by Symbol Technologies."

On the same day, in Rochester, PSC filed a forty-nine page suit in the US District Court for the Western District of New York. PSC's suit charges that "Symbol has undertaken a scurrilous campaign to disseminate false and misleading information" about PSC's DI-1000. PSC also claims that Symbol attempted to "coerce royalty payments from PSC and its customers on the DI-1000 bar code reader even though Symbol knows or should know that the DI-1000 bar code reader is not covered by any Symbol patents."

It is not unusual for court documents to use direct and uncomplimentary language about adversaries. However, unattributable interviews with representatives from both companies indicate that more than the usual animosity exists in this case.

A senior Symbol official told SCAN/DCR: "Our suit covers nineteen patents. We only have to win one claim from any one patent to preclude PSC from the market." Symbol believes it will have another advantage because PSC notified all its customers that it will indemnify each of them against any legal costs or damages incurred as a result of purchasing the DI-1000. "Given the magnitude of the potential damages that could be awarded if we won," the Symbol source remarked, "we question whether PSC has the financial ability to meet the indemnification commitments."

But PSC is very confident of its legal position. According to a well-placed PSC executive: "The DI-1000 is not close to the technology that Symbol has patented. It is not just our attorneys who have given us this opinion. There have been eight outside law firms — who represent our customers — who have looked at this and agreed with us. They [Symbol] are in for the battle of their lives."

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## **On the same day, PSC Filed suit charging that "Symbol has undertaken a scurrilous campaign to disseminate false and misleading information" about PSC's DI-1000.**

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The PSC official was particularly irked by the statement of Symbol Chairman/CEO Jerry Swartz (reported in SCAN Jan 96) that "Symbol's won-lost record in litigation is twelve to zero." The PSC representative retorted: "Symbol has never been to court twelve times. They only went to court once — with Opticon. Every time they licensed someone, they called it a win."

No out-of-court discussions are currently under way and neither party has expressed any interest in resuming negotiations.

### **Comment . . .**

We are left with the distinct impression that much of the noise and furor involved in this dispute is a result of clashing egos. The recognized, established industry leader in hand-held laser scanners and integrated terminals is being challenged by its "protege" — a company which grew and prospered selling laser guns under a Symbol license.

But PSC worked hard and invested heavily in its new DI technology. The company feels it is ready to challenge Symbol and the market on its own. PSC views the DI-1000 as the key product that will provide it with the platform it needs to grow and prosper, freed from what it perceives as the restrictive Symbol licenses.

Putting aside all of the current hostility, the most revealing comment may have been made by PSC's Chairman/CEO Mike Hone. "These legal actions will take many years to be resolved," he told SCAN/DCR on April 8. "In the meantime, this dispute will be won in the marketplace and not in the courts. Five years from now, when it finally does go to trial, the technology will have moved so far past this stage that it will be academic." □

## **ID Expo and *AUTO I.D. News* Magazine Get New Owners**

- By George Goldberg

Last week Advanstar Communications was sold to Hellman & Friedman — a San Francisco based investment partnership. Advanstar had just been placed on the market two months ago (SCAN Feb 96). According to one highly-placed Advanstar executive: "There were more serious bidders in that eight-week period than you can count on the fingers of one hand."

Advanstar owns 55 business magazines and trade journals, and 54 expositions and conferences. In the automatic data capture industry, these properties include the Automatic I.D. News magazine and three trade shows: ID EXPO, SCANT-ECH/Europe and SCANTECH/UK (aka ICAP).

In 1995, Advanstar's revenues totalled \$145.3 million. Net profit (before interest, taxes, depreciation and amortization) was \$24.1 million.

According to a company spokesman, "49% of Advanstar was owned by Goldman Sachs [the financial advisor that was retained to negotiate the sale] and the balance of the stock was held by a varied group of institutional investors, senior management and other individuals."

The price paid by Hellman & Friedman was a healthy \$237 million. Part of this purchase price will be used to pay off the \$179 million debt currently carried by Advanstar.

Hellman & Friedman is an investment partnership with \$1.5 billion of capital. Its properties include Eller Media (the leading outdoor advertising company in the US), Tevecap, S.A. (the largest pay TV company in Brazil), John Fairfax Holdings Limited (a leading Australian newspaper company), and Hoyts Cinemas (a leading operator of multiplex cinemas in Australia, New Zealand and the northeastern region of the US). According to the Advanstar representative, Hellman & Friedman has only twenty-two employees and does not tend to get involved in the operations of its subsidiary companies.

Bill Windsor, President of Advanstar Expositions, was extremely optimistic about the new opportunities that will be available as a result of this change in ownership. "We will be very aggressive in looking for new acquisition opportunities," he told SCAN/DCR on April 18, "and we now will be concentrating on growing the business. We are already looking at a number of attractive possibilities — including some that are related to the ADC industry." He would not be more specific.

Windsor stated that the acquisition by Hellman & Friedman will not change Advanstar's recent decision to move ID EXPO 1997 out of Chicago to Philadelphia. □

## **Global ADC Standards**

- By Bert Moore

As this article goes to print, organizations, companies, and individuals with an interest in the development of international automatic data collection (ADC) standards are converging on Pittsburgh, PA to attend a historic meeting: the first meeting of the U.S. Technical Advisory Group (TAG) for a new JTC1 subcommittee for ADC standards. The purpose of the meeting is to develop a prioritized list of work items to propose to JTC1/SC31 at its first meeting in June, 1996.

JTC1/SC31 finally provides a "home" at the international level for a wide range of ADC standards — from bar code to biometrics. The subcommittee's scope is fairly broad, sidestepping only a few areas in radio frequency identification (RFID) and magnetic stripe where international activities are already under way.

The development of true international standards means easier implementation, greater acceptance, fewer conflicts, and, in general, increased market growth. [Many large multi-national companies, for example, recognize only international, not national, standards. This makes good business sense, since it reduces the likelihood of having to comply with many conflicting "local" standards within the same company.]

## WHO'S WHO IN STANDARDS

### International Standards Bodies:

**CCITT:** Common Commission for International Telephone and Telegraph (not directly involved in ADC standards)

**IEC:** International Electrotechnical Council.

**ISO:** International Standards Organization.

**JTC1:** Joint Technical Committee 1 of ISO and IEC.

**SC:** subcommittee of an international standards body (e.g., SC31, the ADC subcommittee of JTC1)

**TAG:** Technical Advisory Group (one for each member country of an SC; e.g. U.S. TAG for JTC1/SC31)

### Some major national and regional players are:

**AIM USA / AIM Europe:** affiliates of AIM International, Inc. — the trade association for vendors of ADC equipment, services, and supplies.

**ANSI:** American National Standards Institute.

**CEN:** Commission for European Normilisation [Standards]. Charged with developing pan-national standards for the European Community.

**EAN International:** the parent organization of the EAN coding and marking system worldwide. Coordinates the activities of EAN national authorities in all countries except the U.S. and Canada. Affiliated with UCC.

**UCC:** the Uniform Code Council, administrator of the U.P.C. (Universal Product Code) coding and marking system for the U.S. and Canada. Affiliated with EAN International.

## The Challenge . . .

The work of an international standards organization, such as JTC1, is done by subcommittees (SCs). These SCs meet only once about every 18 months, at different locations around the world.

Only representatives of National Bodies, such as ANSI, can attend.] National Technical Advisory Groups (TAGs), where you can make your voice heard, typically meet more frequently to provide input and comment to the national bodies.

The problem is that even with an aggressive TAG meeting schedule it may be optimistic to call progress "glacial" when it comes to developing new standards.

We can't afford to sit back and assume that JTC1/SC31 will solve everyone's problems. "Local" groups (such as industry standards groups, UCC/EAN, and AIM International) must continue to serve the critical role of actively developing many of the standards that will be discussed and approved at the international level.

## Now, It's Up To You . . .

The advent of JTC1/SC31 heralds the opportunity for improved communication and trust among the various groups and countries involved in standards development.

The ADC industry has a good foundation on which to build, with the work already done by AIM International and UCC/EAN International, and the cooperative feeling between various standards bodies; e.g., ISO (International), CEN (European) and ANSI (U.S.).

What's needed now is the active participation in the U.S. TAG by individuals, companies, and organizations that recognize the benefits of international standards.

If you're not already on the U.S. TAG distribution list, contact AIM USA and get involved. The same holds true for the standards-setting activities within various industry groups: get involved. Thinking globally is a lot more work than focusing on your own company's or industry's needs, but global ADC standards are about to become a reality. And if you want the best standards possible, you'll have to be part of the process.

For more information on the U.S. TAG for JTC1/SC31, contact: AIM USA, Pittsburgh, PA, PH (412) 963-8588, FX (412) 963-8753, e-mail: [adc@aimusa.org](mailto:adc@aimusa.org). □

### *About the author . . .*

Bert Moore is the Director of IDAT Consulting & Education, a Pittsburgh, PA-based firm that helps companies understand, evaluate, design, and implement automatic data collection solutions.

Formerly the Director of Technical Communications for AIM USA and Executive Director of the Federation of Automated Coding Technologies (FACT), Moore has long been active in standards development. He is currently Secretary of ANSI-accredited MH10 SBC-8.

## State-of-the-Art

- by Rick Bushnell

### **Camera-type scanners open new vistas**

As we know, over the past five years there has been a rush to come up with reliable, inexpensive, camera-type scanners that are able to read both matrix and linear codes. With these camera/scanners, we can look to a future when a package delivery person could scan the bar code on the package, the signature of the person who accepted it and capture a picture of them as they signed for it.

There are two companies marketing camera-type scanners which process a refined, digitized signal sent from the camera to the processor. Each has the ability to read linear bar codes or a 2-D symbology, located at variable distances or orientations. Both companies are new to the ADC community. One is Impact Technologies (West Palm Beach, FL, PH (407) 820-9422), led by president John Doherty. The other is Auto Image ID (Mt. Laurel, NJ, PH. (609) 222-0668) headed by president Jim Hahn.

Impact is marketing a device which has the ability to read every type bar code omni-directionally. Doherty says the very small optic module has a CCD sensor that is very sim-

ilar to the latest versions of video cameras. "When you think about cameras that can read linear or 2-D symbologies, recognize the fact that the camera can also be used to capture an image," Doherty said. "This opens the market for all kinds of applications, far beyond bar codes."

For example, the camera-type scanner can capture an image of a signature and file it into a computer database for future reference. If you take things a step further, it could be possible to take a person's picture with the camera, as well as the signature for comparison and verification. This technique could eliminate the need for the traditional signature pad on a digitized board like the one used by UPS for example, and improve shipment security of valuable merchandise. The camera/scanner could also be used to document the condition of material damaged in transport. Additionally, printed evidence from the camera could be provided to insurance companies who may require proof before honoring a claim.

The applications for this technology could lead to a number of things. The device marketed by Impact can be plugged right into a normal PC (the software is downloadable from the scanner itself). You could use the scanner as an OCR reader or simply point the scanner at a document, click, and send it electronically to a colleague.

#### **Comment . . .**

Certainly, the image scanners will have their optical limitations, and the companies are not necessarily going to sell them as page scanners. But what seems most exciting is the fact that these devices will open up the office, laboratory and other tested but not heavily-tapped markets. Resellers of "office automation" products, who never thought much about bar codes, probably will wind up as ADC integrators because this type of scanner fills several needs. Those already selling document and imaging systems along with OCR could become a new VAR channel for automatic data collection equipment vendors. □

#### *About the author*

Rick Bushnell is the co-founder and president of Quad II, a consulting and design firm, which helps end-users implement technologies such as EDI and bar coding. Bushnell got his start in the auto-ID industry in 1969 while working for 3M when they were installing large bar codes on railroad cars. Quad II has a web-site on the Internet about the ADC industry that can be accessed at (<http://mgfx.com>).

## **Biometrics Gaining Momentum**

*- by Bert Moore*

Biometrics, the ADC technology that uses unique features of the body for identification, may be poised to come into mainstream use.

Biometric systems, including fingerprint recognition, voice

prints, and retinal scanning (reading the pattern of capillaries in the back of the eye) have been around for years. Until recently, however, they've mostly been seen in high-security, government installations where both the will and the money to push the envelope of technology exist.

The key benefit of biometrics, of course, is that these identification technologies don't rely on cards, tags, or even code numbers that can be lost, stolen, or even coerced out of someone. For unattended access control, biometrics have held the promise of a truly secure technology. To date, however, they've been expensive and not 100% reliable (erring on the side of caution, they produce a relatively high number of false rejections).

That's changing rapidly. For example, the Secure ID Division of Spectrum Systems Ltd., (Princeton, NJ, PH (609) 439-0080), recently introduced a fingerprint recognition system that's not only relatively inexpensive (a few thousand dollars rather than tens of thousands) but also relatively fast — verifying a fingerprint in about three seconds or less. This system encodes fingerprint pattern algorithms on a magnetic stripe card that the reader compares to the live fingerprint. The use of the card, rather than a database, allows the system to work as a stand-alone entry device.

#### **The Implications Of This Are Significant . . .**

The lower cost and increased performance of biometric systems means that more "average" companies will be able to take advantage of the technology for unattended access control to secure areas.

In the next few years, if the price/performance ratio continues the current trend, potential applications will begin to ripple out in all directions.

Imagine a time clock that takes a thumbprint instead of a card (no more "buddy system" clocking in or out). Or a law enforcement system that takes electronic fingerprints rather than ink and paper. Or a medical records database keyed to your physical characteristics (particularly useful in medical emergencies far from home). Or, my personal favorite, "keyless" locks that recognize you (no more fumbling in the dark for home or car keys in a freezing rain).

#### **Comment . . .**

Biometrics is benefiting from the same improved speed and performance (as well as reduced costs) of microprocessor technology. As microprocessors continue to become more powerful, smaller, and cheaper, biometric systems will expand. □

## **Untapped, Potentially Huge Market For Bar Code Industry**

SCAN/DCR interviewed Tim Eusterman, director of market development at Zebra Technologies, for his view about where the bar code industry will be in three to five years.

Zebra Technologies Corporation, Vernon Hills, IL, PH (847) 634-6700, FX (847) 913-8766, manufactures thermal transfer printers, and related software and materials. President, Edward Kaplan and Executive VP, Gerhard Cless founded the company, then called Data Specialties, Inc., in 1969.

Data Specialties' business was based on the paper-tape, punch technology used to drive most computers of the time. The name was changed to Zebra Technologies in 1986 when Data Specialties' name and the paper-tape, punch business was sold to G N Telematic.

**SCAN/DCR:** Where do you see the biggest opportunities in bar coding three to five years from now?

**Eusterman:** Small business. We expect the small-business market to be an explosive area of growth for bar code technology. In the beginning, the bar code industry served the largest companies. Small-business owners are now looking for inexpensive, simple ways to bar code products. Possible applications include document or tool-room tracking.

**SCAN/DCR:** What changes will need to take place for this to happen?

**Eusterman:** As an industry, we need to develop simpler, more easily-used bar coding solutions if we are going to reach the broader small-business market. For example, smaller companies have the same need for tracking inventory as their larger counterparts. Therefore, product manufacturers who want to tap this market have to provide economical, easy-to-use, PC-based bar code technology.

Small businesses usually do not have a systems integration staff. Therefore, bar coding equipment vendors will need to sell bar code technology packages. The package will need to include labeling-software, plus a low-end scanning wand and a simple database program. In the future, user-friendly products will be the key to capturing the small business market.

**SCAN/DCR:** Do you believe distribution channels will need to change to service this market?

**Eusterman:** Small-businesses don't normally have the time or staff or budget to seek out bar code product manufacturers the way a large end-user will. These small-business decision makers will want to buy their bar coding products the same way they currently buy their other computer-related products - through their local reseller or catalogs. Small companies are used to turning to these sources

Tim Eusterman was formerly director of marketing at Quality Micro Systems (Mobile, AL). Prior to QMS, Eusterman worked in the marketing department at Fujitsu.

## APPLICATIONS

### BAR CODING AIRCRAFT TIRES

Jeff Thompson, bumpy bar code (BBC) marketing manager with Sensis (Dewitt, NY) says they have been marking and tracking air-craft tires that may have been retreaded up to 10 or 12 times. Thompson says Goodyear has been molding a BBC that lists a part number and individual serial number, directly into each tire. Maintenance crews scan the code and record the information. They can then determine if the tires are still safe for use. (Sensis, Dewitt, NY, PH (315) 445-5736, FX (315) 445-0194) □

### BETTER LABEL ADHESIVE

Eltron reseller STG, Inc. (Systems Technology Group, Medway, MA. PH (508) 533-7633), has discovered a way to bar code gold bars. STG spokesman Dick Steinhoff says the codes are streamlining cumbersome, manual cycle-counts performed during manufacturing. Steinhoff said, "The problem was finding a label that would adhere to the rough surface of the gold bar." STG worked with a label converter for over a year to find a solution. The label has a mushy adhesive that works on either fiberglass, metal or wood. Steinhoff would not reveal his customer's name. □

### MEDICAL APPLICATION

Joe Shepard, president of Xico, Inc. (Chatsworth, CA), told SCAN/DCR that last fall the FDA approved a laser operation for near sighted individuals that changes the refraction of the cornea. The laser instrument uses a Xico reader/encoder to print and encode operation parameters on the back of a card. The encoded card then serves as the patient's medical record. (Xico, Inc., Chatsworth, CA, PH (818) 709-4403) □

### RF TECHNOLOGY IN BOSTON MARATHON

This year 38,000 people, four times the annual average, registered to run in the April 15 Boston Marathon. This large field prompted organizers to use radio frequency identification (RFID) and bar codes to officially track finishing times and order of finish. According to Jim Gallagher, systems integrator for the Boston Athletic Association, a chip was attached to the shoelace of each runner. The chips, made by Championship (Netherlands), were scanned by antenna mats at the finish. A base computer then received the data via RF in real-time. As a back-up, Intermec's (Everett, WA (206) 348-2600) JR2020 wireless hand-held scanners were used to read bar codes on each runner's identification bib, as has been done in the New York and Boston marathons for many years. That data was also sent via RF to a base-computer. □

### STILL ANOTHER USE FOR 2-D SYMBOLOGY

Symbol Technologies, Inc. (Holtsville, NY) will supply scanning technology to Sensormatic Electronics, the official electronic security vendor for the 1996 Summer Olympic Games in Atlanta. Symbol is providing their PDF417 2-D symbology that will appear on identification badges on

## APPLICATIONS CONT.

about 150,000 athletes, support personnel, media and special guests.

The special access badges will have the person's photograph, and a PDF symbol. Doug Picker, company spokesman for Symbol says, "Encoded within the PDF symbol will be information that will instruct security people where the badge holder is allowed to go. For example, to get to the media room, you need to get past a certain access point. As you approach the security person, they will scan the badge. It will notify them if you are permitted access." Symbol PDT 3500 hand-held computers with built-in PDF417 scanners will be used to check the badges.

Picker says, "The whole thing about 2-D is that it's a compact and mobile database." The 2-D code is just a little bigger than a postage stamp and contains more than a kilobyte of information. □

## FINANCIAL NEWS

### PSC: SALES DOWN, PROFITS DOWN

PSC, Inc. (Webster, NY) announced net sales for the first quarter ended March 31, 1996 were \$21.5 million compared to \$22.3 million for the same quarter a year ago. Net income for the first quarter of 1996 was \$435,000, \$.04 a share. That is compared to \$1.9 million, \$.22 per share, for the first quarter last year. First-quarter results were mainly impacted by lower scan engine sales associated with the new DI-1000 products. Increased development and start-up costs connected to PSC's new South American Subsidiary also affected first-quarter results. □

### COMPUTER IDENTICS: SALES UP, PROFITS DOWN

Computer Identics Corporation (Canton, MA) reports a

seven percent increase in sales for the first quarter of 1996 compared to the same time last year. Computer Identics reported a net profit for the three months ended March 31, 1996 of \$105,000, or \$.01 per share, on revenue of \$7,266,000. This compares with a net profit of \$257,000, or \$.02 per share, on revenues of \$6,780,000 for the same quarter in 1995. □

### TEKLOGIX ACQUIRES BADGER

Teklogix International, Inc. (Mississauga, Ontario) has acquired, through its U.S. subsidiary, Badger Computers (Tampa, FL). Badger is a business unit of Group Technologies Corporation. Terms of the transaction were not disclosed. Badger manufactures PCs for use in wide-area network applications in transportation, field service and public safety. Teklogix provides wireless data communication systems for warehouse distribution, vehicle rental and yard control operations. □

## SHOWS & CONFERENCES

### May 2-5 1996

NTEA (National Time Equipment Association) Annual Convention, Nashville, Sheraton Music City Hotel. Contact: Norman Gage or Douglas Davenport PH: (800) 235-6832 or PH: (216) 741-8880 □

### May 14-16

ID EXPO & MDCC, (Mobile Data Capture & Communications), Chicago, Rosemont, Convention Center. PH: (800) 331-5706, FX: (216) 826-2801 □

### May 15-17

HIBCC (Health Industry Business Community Council) Symposium and Hands-on Workshop, Chicago, Hyatt Regency, O'Hare., PH: (602) 381-1091, FX: (602) 381-1093 □

## SCAN: The DATA CAPTURE Report

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