December 27, 1996

DID YOU KNOW?

O'BRIEN RESIGNS AS PSC PRESIDENT

John O'Brien, former president of **Spectra-Physics** and current president of **PSC**, has chosen not to extend his employment agreement with PSC beyond January 12, 1997. O'Brien was named president of PSC after the scanner manufacturer acquired Spectra-Physics in August of this year (*SCAN/DCR 8/9/96*). PSC recently hired Robert C. Strandberg who will assume operational responsibility for the Rochester, NY, and Eugene, OR, manufacturing and engineering functions, in addition to his other responsibilities as executive vice president.

Editor's note: SCAN/DCR learned of other personnel changes going on at PSC but did not have time to verify the information. Watch in the next issue for further details.

TELXON ANNOUNCES SALE OF ITRONIX

In other late-breaking news, **Telxon** issued a press release announcing its letter of intent to sell for cash, the assets and business of its ruggedized notebook computer subsidiary, **Itronix Corporation**, to **Dynatech Corporation**. Telxon President/COO, Frank Brick stated, "The possible sale of Itronix would add to the many steps we have already taken to increase our focus on our core mobile computing, wireless networking and systems integration business."

Editors note: SCAN/DCR will try to obtain more details about the possible sale for our next issue. Watch for further developments. SCAN

Symbol Technologies Begins Shipments On $20 Million Order

Starting immediately, **Symbol Technologies** will be shipping its WS 1000 scanner-on-a-ring, wearable and wireless system to over 18,000 **United Parcel Service** [UPS] workers at 250 hubs. The $20 million order for the WS 1000, released in January of this year, represents one of the largest contracts ever for Symbol and the Auto ID industry.

The new unit combines a back-of-the-wrist computer, a ring scanner and a Symbol Spectrum One® RF (radio frequency) network. The WS 1000 minimizes the time and motion required by workers to complete their jobs. It allows them to scan, compute, and transmit information while using their hands for other tasks. UPS workers sort and route 11.5 million packages per day to be delivered worldwide. Sources at UPS say they are able to shave seconds off each transaction, cutting costs and increasing accuracy.

Sources at Symbol believe the UPS sale will "legitimize" the new product for others who have been waiting for this type of scanner/computer technology. Two large grocery chains, **AWG** (Associated Wholesale Grocers) and **HEB** (a multi-billion privately held company), have also placed orders for the WS 1000.

In warehouse/distribution environments, the computer/scanner-on-a-ring can be used for tracking goods in shipping and receiving, order picking, stock pulling and put-away, cross-dock transfers, and inventory cycle counts. In retail environments the WS 1000 can be used for point-of-sale applications, shelf-price audits, store transfers and inventory management. Other possible users cited by Symbol include: freight companies, airlines, parcel and package delivery companies and manufacturers.

The wrist mount computer fits wrists of all sizes and its carrier is removable, enabling employees to have their own wrist mount so hygiene is not a concern. Because it weighs just 9.5 ounces/270 grams, the WS 1000 can be

used for extended periods of time. The unit operates on a 12 mAh lithium ion battery, which not only delivers power over a full shift, but can be recharged in two hours.

The RS 1 Ring Scanner, part of the WS 1000 package, weighs 1.7 ounces/48 grams and is worn on the user's index finger. It's scanning range is four to 25 inches/10 centimeters to 64 centimeters and it has the ability to read even poor quality bar codes. The 675 nanometer laser has a scan-rate of 36 scans per second. As a safety feature, Symbol designed the RS 1 Ring Scanner to break away from the finger at under 20 pounds/9 kilograms of pressure.

The RS 1 is also available separately and may be retrofitted to a wide range of Symbol and other manufacturers' mobile computers. Users can easily convert from a traditional wrist-mounted scanner to the new ring scanner because of its plug-and-play capabilities.
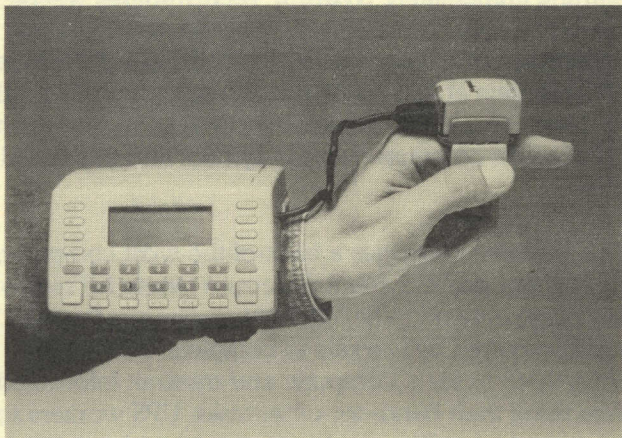
With the WS 1000 System, distribution companies can pick orders, pull stock and conduct inventory counts while staying hands-free to move goods.

The WS 1000 offers two means of data transmission: batch, or on-line wireless communications through Symbol's Spectrum One® radio frequency wireless LAN technology. The WS 1000 is DOS software-compatible so it can be integrated into existing applications. It has 640 KB RAM/512 KB nonvolatile memory.

Jerry Swartz, Symbol CEO/chairman, told *SCAN/DCR*, "The WS 1000 wearable is a technological breakthrough in ergonomics and miniaturization." According to Symbol, this is the first unit of its kind.

UPS personnel worked with Symbol during the design stage of the WS 1000, offering ideas for what would make the product better adapted for the UPS work environment. Symbol sources told *SCAN/DCR* the entire UPS order is scheduled to be completed by mid-1997.

For more information: **Symbol Technologies, Inc.**, Holtsville, NY, PH (516) 738-4699, FX (516) 738-4645, E-mail: picker@symbol.com. **SCAN**
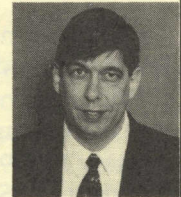
Will Fingerprint Technology Dominate The Biometric ID Industry?

The battle for leadership in the biometric ID/verification industry rages on. The winner may be determined by which company can continue to fund expensive, research and development programs while making little or no profits. Randall Fowler, president/CEO of **Identix, Inc.**, a leading developer and supplier of fingerprint technology, believes his company will ultimately win the war and that fingerprint ID will be the predominant choice in biometric verification.

For years, banks and other credit card providers relied on signatures as the major form of identification. PINs [personal identification numbers] and a cardholder's, mother's maiden name have also been used as standard forms of identification. However, these methods are very susceptible to fraud. Much of our standard identification information [maiden names, social security numbers, phone numbers, etc.] can easily be purchased by surfing the Internet.

Because of this susceptibility to fraud, a new form of personal verification must be found. Some of the choices include: fingerprints, voice recognition, palm/hand geometry, retinal scanning, iris scanning and facial scanning. Although Fowler conceded that some of these identification methods are very accurate, he believes fingerprint technology will become the method of choice by major credit card providers and time and attendance hardware/software vendors.

A major part of Fowler's reasoning for this conclusion is fingerprint technology is less "intrusive" than other forms of biometric ID. This is and will continue to be a key issue in the acceptance of any biometric ID form. Regardless of accuracy, a system is useless if the general public refuses to embrace the technology.

For example, while retinal scanning is a very accurate form of biometric ID, it has not been widely used because people shy away from anything pointed at their eyes. In retinal scanning, a laser is pointed at the eye and scans the blood vessel pattern on the retina, while the person being identified sits very still with eyes opened during the identification process. This is viewed as intrusive by consumers.

The use of fingerprints for personal identification is much less intrusive than other forms of biometric

ID. The typical "fingerprint system" is very easy to use. A user simply places a designated finger or thumb in a small slot in the "fingerprint reader" while the system records the pertinent biometric data.

Once recorded, entry to a building [whether for time and attendance or access control purposes] is accomplished by the user placing the same finger or thumb in the reader, a process which takes only seconds. According to Anna Stockel, director of biometric business for Identix, the biggest problem with fingerprint ID is a dirty work environment. Workers who have dirt or grease on their hands may cause a problem for the "reader." Dirt and grease may fill the grooves in the fingerprint.

Although fingerprint ID does not frighten people physically, other ramifications come into play. The term "fingerprinting" is often associated with criminals and law enforcement. Fowler said he has not seen a tremendous amount of resistance to
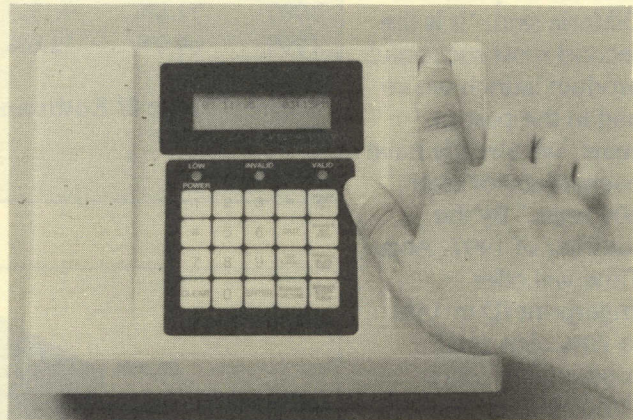
The Unitime Biometric Timeclock employs the use of fingertip ID technology developed by Identix and incorporated into hardware manufactured by Accu-Time Systems.

fingerprint technology because of this stigma. However, others we talked to told us it is an issue that must be addressed when using this biometric characteristic in time and attendance applications.

Identix has installed thousands of fingerprint systems in 50 countries worldwide. In Australia, a chain of 500 Woolworth stores uses fingerprint technology in its time and attendance hardware to monitor over 100,000 employees. Fingerprint technology is also used for identification applications such as drivers' licenses, for welfare fraud prevention, and in automatic teller machines. Fowler believes fingerprint ID will be a critical factor in electronic commerce development as well. "It is imperative to know who's on both ends of the [telephone] line in electronic commerce applications," Fowler asserted.

Fifty percent of Identix's annual revenues is from service. The remaining 50% is from actual product

sales. The "service" portion of the revenues refers to applications where Identix actually performs the fingerprint ID for a customer rather than selling a system. Product sales are divided evenly between law enforcement and commercial verification applications.

Identix serves as an OEM [original equipment manufacturer] for a number of other companies. One such company is **Accu-Time Systems, Inc.**, a time and attendance hardware manufacturer that licenses Identix's fingerprint technology. Accu-Time president, Peter DiMaria, told *SCAN/DCR* that his company recently started using fingerprint technology in its time and attendance products.

"This is the first time we've incorporated biometric ID into one of our time and attendance products," DiMaria said. "It is the second most successful product launch we've had in the past six years. We already have backorders for over 600 units." By the summer of 1997, Accu-Time will offer fingerprint ID in 15% to 20% of its total product line. Accu-Time also serves as an OEM of fingerprint ID, time and attendance units for **Unitime Systems, Inc.**

On November 7, Unitime Systems announced the introduction of its new Unitime Biometric Timeclock which incorporates the company's time and attendance software with Accu-Time's hardware. The new product sells for $3,395. About half of that figure goes for the fingerprint verification technology/equipment. Unitime Systems was founded in 1993 and refers to itself as a "national" systems integrator. The company not only sells the time and attendance hardware/software but provides training as well. Annual sales for the young company are over $1 million per year.

Unitime's president, Bill Korstad, believes there is a stigma surrounding fingerprint technology, unlike Fowler and DiMaria. "An employer using this

technology must address the 'big brother' issue head-on before implementation," said Korstad. "You must explain the system benefits to employees. And, you must reassure them there is no way any law enforcement agency such as the CIA or FBI can use their fingerprints."

Editor's note: The "big brother" issue refers to the theory that the government is watching over us and monitoring our moves and behavior.

Only portions of the actual fingerprint are used for time and attendance verification and this is not enough for government use. The employer's benefit is that fingerprint verification eliminates "buddy punching," the process where one employee punches another's time card. Often if an employee is going to be late for work, he asks a friend to punch his timecard so he is not marked late by his employer.

Although Identix was founded by Fowler in 1982, it has only begun to show a profit in the last several financial quarters. Fowler told us sales volume has been low while research and development costs have been high. And he feels this is a problem for most companies involved in biometric technology development. "The tide is just starting to change for our company after being in business for 14 years," Fowler confided. "I used venture capital, an initial public offering, industrial investors, and a secondary preferred stock offering to keep the company going all these years."

Sales have been growing steadily for the company over the last four years. In 1992, annual sales were at $4 million. In 1993, sales jumped to $11 million. By 1994, Identix sales were $20 million. Annual sales climbed to $27 million in 1995 and $38.5 in the company's fiscal year 1996. With the trend towards

U.S. electronic access control systems market by revenue

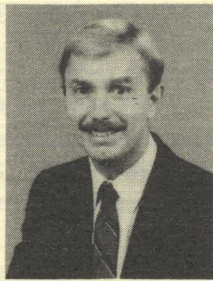| Year	Card	Biometric	Keypad	Others
1989	74.7%	5.3%	8.1%	11.9%
1994	74.4%	6.3%	8.0%	11.3%
1997	72.5%	9.1%	7.7%	10.7%
1999	69.9%	12.6%	7.4%	10.1%

Source: Frost & Sullivan
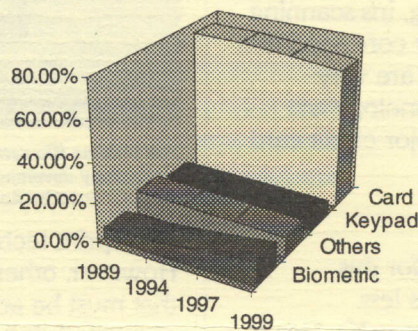
replacement of passwords and PINs by biometric technology, Fowler said he would be disappointed if annual sales for Identix did not exceed $500 million in the next five years with a 15% to 20% profitability rate.

Randall C. Fowler, President/CEO, Identix Corporation.

[*Because Identix is a public company, Fowler prefaced his remarks with the caution that his forward-looking statements relating to the company's future sales performance are subject to a number of risks and uncertainties.*]

Comment: The widespread use of smart cards and particularly the prospect of a cashless society will require a replacement for traditional methods of identification. PINs, maiden names and signatures will not suffice.

Biometric ID is the natural choice to replace these methods. Every company providing a form of biometric ID is anxious to capture this business. And not too surprisingly, each company believes or says its method is the best.

*Stock market reports last summer showed the investment community is looking for a bandwagon to jump on. Remember **Comparator**, the fingerprint identification company whose stock jumped from pennies per share to over $5 per share almost overnight? Comparator's performance turned out to be a disaster and the company was investigated by the Securities Exchange Commission. But the point is, people believed this technology could explode in sales.*

*In August, the **New York Times** reported that although Identix was certainly a stronger/more-stable company than Comparator, investors should still proceed with caution. It pointed out that Identix had rarely shown a profit in the history of the company. This seems to be characteristic of companies doing biometric research.*

With the upward direction electronic commerce and smart card technology is taking, biometric technology may become a profitable pursuit. Companies providing biometric identification systems may finally have the markets they have been waiting for.

For more information: **Accu-Time Systems, Inc.**, Ellington, CT, PH (860) 870-5000, FX (860) 872-1511; **Identix, Inc.**, Sunnyvale, CA, PH (408) 739-2000, FX (408) 739-3308; **Unitime Systems, Inc.**, Boulder, CO, PH (800) 611-4762, FX (303) 494-7387, E-mail: bkorstad@unitime.com. SCAN

DOD Will Award Over $500 Million To Small Businesses For R&D

In fiscal year 1997, the **Department of Defense** (DOD) will award $520 million in research and development contracts to small technology companies. DOD's Small Business Innovation Research (SBIR) program is currently accepting applications with a final date of January 8, 1997. The contracts offer AIDC companies the opportunity to reduce research and development costs, while also opening new avenues for business opportunities.

The purpose of the DOD's SBIR program is to harness the innovative talents of our nation's small technology companies for the benefit of both the U.S. military and the U.S. economy. In a *SCAN/DCR* interview with Christine Villa of the Office of the Secretary of Defense, Small & Disadvantaged Business Utilization Division, small businesses are defined as "any company with less than 500 employees."

An example of one company that used the program is **Savi Technology, Inc.** of Mountain View, CA. Using a combination of Navy SBIR funding and private venture capital, Savi developed a radio computer tag called the "SaviTag." The SaviTag can be attached to military cargo containers, as well as other crates or containers used for transport, and will automatically track container locations and contents.

The SaviTag was developed with $2.5 million in SBIR funding (three awards) and has become a central element in DOD's Total Asset Visibility effort — the DOD effort to be able to pinpoint the location and content of every plane, ship, tank, and cargo container in transit around the world. In 1994, the Air Force awarded a $71 million contract to Savi. DOD now uses the SaviTag in its logistical operations, including almost all shipments to Bosnia.

Twice yearly [from Oct.-Jan. and from May-July], a topic book is published and distributed to small business owners interested in the program. The topic books list areas of research which interest the government. In essence, the government believes these are problem areas and wants companies to develop solutions to these problems through research in the private sector.

"The books should be read with a broad scope in mind," said Villa. "The areas of interest are very general and it is up to small business owners to tie their research to one of the topics." The **Small**

Business Administration [(202) 205-6450] can also be contacted for a schedule of solicitation release dates.

The SBIR program is a three-phase program. Phase I awards are limited to $100,000 and are for the purpose of determining the technical feasibility and merit of innovative ideas and concepts submitted in response to an SBIR solicitation. Phase II awards, as much as $750,000, can be made on the basis of results from the Phase I effort and the scientific and technical merit of the Phase II proposal. Phase II is the principal research and/or development effort, typically covering two to five person-years.

Editor's note: A "person-year" is a common term used in government agencies to describe the amount of work one person can accomplish in one year. Thus, if it has been determined that it takes one person one year to finish a specific project, it should take two people six months to finish the project.

In Phase III, the SBIR recipient is expected to acquire private-sector financing to bring the product to market. No SBIR funds are committed in Phase III but the agency may contract for follow-up work with non-SBIR funds.

To be eligible for participation in the SBIR program an applicant must meet the following criteria at the time of award:

1.) The small business concern is one which is independently owned and operated and organized for profit, is not dominant in the field or operation in which it is proposing, and has its principal place of business in the United States.

2.) The small business concern must be at least 51% owned, or in the case of a publicly owned business, at least 51% of its voting stock owned, by United States citizens or lawful admitted permanent resident aliens.

3.) The small business concern has, including its affiliates, a number of employees not exceeding 500 and meets the requirements found in 13 CFR 121 [the Code of Federal Regulations].

A similar program is the Small Business Technology Transfer [STTR] program. STTR is a three-year pilot program enacted by Congress to fund cooperative R&D projects between high-tech small businesses and non-profit research institutions. Each agency with an extramural R&D budget in excess of $1 billion must set aside a percent of those R&D dollars for awarding contracts to small businesses working jointly with research institutions.

Five federal agencies participate in the STTR program: the Department of Defense, the **Department of Energy** (DOE), the **National**

Aerospace Agency (NASA), the **National Science Foundation** (NSF), and **Health and Human Services** (HHS). The DOD has five component programs with the **Army**, **Navy**, **Air Force**, **Advanced Research Projects Agency** (ARPA) and **Ballistic Missile Defense Organization** (BMDO) as active participants.

The main objective of the STTR program is to achieve technological progress by joining the innovative ideas of scientists in the nation's research institutions with the entrepreneurial talents of the high-tech small businesses in cooperative ventures. Another objective is to bridge the funding gap in technology commercialization between basic research and commercial product. Eligibility requirements are similar to the SBIR program. STTR is also a three-phase program.

A web site for participants interested in either program has been developed at http://www/acq.osd.mil/sadbu/sbir/.

Comment: Although this program is not exclusively for the AIDC industry, it offers many opportunities for our growing businesses and the development of new AIDC technology. The success achieved by SaviTag proves the inherent value of this program to small companies developing new technologies and looking to break into the government market.

For more information: **Office of the Secretary of Defense**, Washington, DC, PH (703) 205- 1532, FX (703) 204-9447, E-mail: cvilla@brtrc.com. **SCAN**

AIM USA Annual Meeting Yields Surprising Results

AIM USA held its annual meeting in Orlando, FL, from December 2-5 and it started with what seemed to be a tape recorded version of the June meeting. During the first day's leadership conference, members again expressed concern over issues such as lost revenue from the sale of the **SCAN-TECH** trade show, poor attendance at meetings, dissatisfaction with AIM's new CEO-level board of directors and the perception that the real "doers" in the organization have been pushed aside.

Editor's note: There is nothing wrong with members expressing negative feelings about how the trade association is run, but there is a point where they must move on and decide how to solve the problems. And this is where the December meeting differed from the June meeting.

But, as AIM members went about the business of conducting individual council meetings, a new sense of enthusiasm for tackling tough issues seemed to take over. This is not to say things were rosy for the rest of the annual meeting. There were many times when the members voiced their opinions about items such as the direction AIM should take as a trade association, the need [or lack of it] for another trade show, and basically how AIM should be managed. But, the overall mood was different.

In a subsequent interview, AIM President/CEO, Larry Roberts told *SCAN/DCR*, "I was very happy with the results from our annual meeting. It is healthy to get our problems out in the open and discuss them. I really felt that this meeting differed from some of the meetings in the past. Our members seem ready to move on. A lot of worthwhile things were accomplished."

Larry Roberts, AIM USA President/CEO

One such "thing" was an informal survey which produced a list of the top four vertical markets according to AIM members. They are transportation, manufacturing, warehousing/distribution, and electronics. Another accomplishment was that individual councils from the various technologies streamlined their organizational structures. Also, these same councils tackled the work of developing educational brochures. The Consulting, Software and Systems Integration Council continued work on a form to help end-users define their expectations from an AIDC system as well as select an appropriate provider.

Roberts also discussed some of the other member concerns. Some members have questioned the value provided by the CEO-level staff, a product of the reorganization of AIM USA after the SCAN-TECH sale. Roberts pointed out that the new board had a number of difficult challenges to face [and solve] which took time away from attention to other matters. "When the new CEO-level board took over, they had to immediately deal with financial and organizational problems. We were losing money and the SCAN-TECH sale just made financial matters worse because we lost the revenue from the show. This is the first year since the sale of SCAN-TECH that we actually made money. That is no small accomplishment."

Editor's note: AIM now predicts a $30,000 surplus for 1996.

Part of the reason AIM has turned itself around financially is due to the success of **IQ**, a revised version of its **Quick Response** conferences. These educational seminars have been very popular with members of the AIDC industry. Roberts stated, "It

was a gutsy move for the board to invest money in IQ at a time when AIM didn't have it. But, it paid off and that's the type of decision making we were looking for with a board comprised of CEOs."

A notable concern was the drain IQ places on AIM's time and resources, particularly with respect to the AIM staff. Once again, AIM has a money-making "show" but is in danger of dedicating too much of its time and effort to managing the event. Roberts told *SCAN/DCR* that, rather than selling the show, AIM would likely consider subcontracting IQ's management to an outside firm.

Another hot topic at the annual meeting was the Info Expo trade show which **Reed Exhibition Companies** is planning for May 1998. John Lewinski, Reed's VP, media and entertainment group, fielded questions from AIM members about the need for another show. Lewinski told listeners the new show is not meant to compete with **ID Expo** and that Reed has already had a positive response to the newly slated show [he said approximately 20 exhibitors have signed up].

However, the overwhelming response from *SCAN/DCR* interviews has not been positive. Vendors we talked to expressed concern over the expense of exhibiting at three trade shows and the possibility of Reed holding a monopoly if the company should force **Advanstar Exhibitions** to drop the ID Expo trade show.

AIM will soon issue a formal statement regarding Info Expo. Roberts told *SCAN/DCR* AIM will not sponsor the new show either financially or from a managing standpoint. *SCAN/DCR* will report more when the formal announcement is released.

Comment: There are some sore spots that may never be overcome with the AIM membership. One of the most prominent is the SCAN-TECH trade show sale. It comes up at almost every meeting. But, it serves no purpose to complain about past decisions.

It is interesting that with the build-up of IQ, AIM is now back in the business of sponsoring conferences. The organization hasn't completely recovered from the ill will surrounding the sale of one show and it is now involved in another. We're not saying that AIM's sponsorship of IQ is a bad thing. Rather it is ironic. However, Roberts assures us the organization will neither sell IQ nor let it become a burden to the staff.

AIM members should be thrilled with the success of the new show. Many told us they hope dues can be lowered if IQ revenues continue to grow. Like the SCAN-TECH sale, the new increased dues structure is a constant sore spot.

After talking with Larry Roberts, we believe it is possible the CEO-level board may have been judged a little too harshly. After all, they have returned AIM to the black financially. And, Roberts told us he is confident the newly-elected board members (SCAN/DCR 11/22/96) will be of great value to the organization.

Many other topics were covered at the annual meeting and SCAN/DCR will continue to follow-up on the latest developments for our readers.

For more information: **AIM USA**, Pittsburgh, PA, PH (412) 963-8588, FX (412) 963-8753, E-mail: larryroberts@aimusa.org. **SCAN**

Symbol And Metrologic Finally Bury The Hatchet.... Licensing Agreement Signed

Could it be the spirit of the season? **Symbol Technologies** and **Metrologic Instruments**, two long-standing foes, jointly announced on December 19 that they have entered into a comprehensive cross-license agreement.

Under the terms of the agreement, Metrologic is granted a royalty-bearing license under Symbol's laser scanning patents, including rights to develop and market Metrologic's next-generation, triggerless laser scanning bar code products. Symbol also has the option for royalty-bearing licenses under a broad range of Metrologic patents as well as the option to purchase certain Metrologic products under Symbol's private label.

The feud between the two companies dates back to the late '70s. Harry Knowles, president/CEO of Metrologic, had developed the AIDC industry's first laser verifyer. When Symbol came out with the first hand-held laser scanner and obtained the patent on the technology, Knowles felt he had been robbed because he believed Symbol used the laser technology he had developed.

Since then, the two companies have been in and out of court, in one patent dispute after another. One of the most notable courtroom battles was when, in the late '80s, Knowles testified against Symbol for **Opticon**, another scanner manufacturer. Symbol won the suit but the dispute with Metrologic has continued until now.

Comment: Congratulations to both companies on the new agreement. Metrologic and Symbol have pioneered some of the best laser scanning products developed for the AIDC industry.

It would be far better if all AIDC companies could spend money on developing new and improved products rather than lining the pockets of lawyers. Knowles and Swartz are to be commended for setting aside their differences for the good of their companies.

Once again, congratulations and a happy and prosperous new year to all our readers!

For More Information: **Metrologic Instruments**, Blackwood, NJ, PH (609) 228-8100, FX (609) 228-6673, E-mail: marketing@metrologic.com; **Symbol Technologies, Inc.**, Holtsville, NY, PH (516) 738-4699, FX (516) 738-4645, E-mail: picker@symbol.com. **SCAN**