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## In one of the understatements....

...of the year, Bob Cummins, President of Fargo Electronics (Eden Prairie, MN), recently told SCAN: "Yes, there is lots of price activity among the thermal transfer printer manufacturers and it is safe to say that prices are not going up."

In 1990-91, Fargo introduced its Prodigy line of thermal transfer printers and pegged the price at a then-unheard of range of \$2,195 to \$2,495. Zebra Technologies (Vernon Hills, IL), the industry's leading manufacturer of thermal transfer printers, immediately countered by lowering the price of its own models in the same category. Most industry observers believed that these aggressive moves turned out well for both companies, since it expanded the low-end thermal transfer printer market by enticing many customers away from the less expensive but lower quality dot matrix units.

Just prior to SCAN-TECH 92, word was out that Fargo was about to make another dramatic price cut, and Zebra moved quickly to meet the challenge. At the Anaheim convention, both companies unveiled their newest models, each priced at \$1,495. Fargo did not exhibit at the show, but their new low-end Allegro printer was displayed in a hotel suite. Zebra reportedly had rushed their new Stripe 300 model to be ready for the convention to match Fargo's new release.

The major markets for these low-end thermal transfer printers are in the industrial sector -- mostly on the factory floor. Now the question is: Will this pricing move expand this market segment once more, or are these two companies vying for the same piece of business?

One very knowledgeable industry source -- preferring to remain anonymous -- believes that the worldwide market for thermal transfer printers for manufacturing applications is about 50,000 units per year, that sales are probably growing at the annual rate of 15-20% and that "there just may not be enough additional business to justify this new price reduction." His conclusion: "This may just wind up as a blatant attempt by both companies to capture market share from each other rather than to expand the market."

Fargo's Cummins totally disagrees: "In a factory environment," he told SCAN, "where you currently might have just one central printing station for five to ten production lines, at these lower prices the customer might now buy additional units for each line or each area. That's our idea in making the price more attractive. It's fair to say that Fargo has been one of the leaders



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in aggressive pricing of these printers. It's hard to predict whether prices will come down any more."

Zebra would prefer an entirely different scenario. "This is not a price-point [\$1,495] that I would pick all by myself," Zebra's VP Marketing, Jack Kindsvater, told *SCAN*, "but we will remain competitive." Zebra had planned to stay with its new Stripe 500 model at \$1,995. When Fargo forced its hand, Zebra responded with the less expensive Stripe 300 model at \$1,495. "The differential between the \$2,000 and \$1,500 price-points is getting to where I do not see the difference," Kindsvater remarked, "and when customers recognize what they give up for that \$500 difference, they will go for the Stripe 500."

No one suggests that the size of the bar code thermal printer market will ever increase to the point where the economies of scale achieved by the estimated 2.5 million units produced for the office automation industry can be achieved. It might very well be, therefore, that prices will harden at the current level.

With a current total worldwide market of 50,000 printers of this type -- from all manufacturers, at all price levels -- there is probably only room for one or two companies to make a profit at the \$1,500 level. Thermal transfer printer prices may have finally bottomed out.

#### The interrelationships....

....among the various public companies in the automatic data capture industry, and the way in which the performance of one company may affect the share prices of others, was noted in Zebra Technologies' third quarter (9/30/92) Letter to Stockholders. President/CEO Ed Kaplan wrote:

"Our performance [year to date sales up 30% and profits up 44%] contrasts sharply with other companies in the automatic identification industry, several of whom reported disappointing results in the quarter because of their heavy dependence on sales to the retail market. In contrast, Zebra's primary markets are in manufacturing and service industries. As a result, our order rates and shipments continued strong, despite problems in retailing. *Nevertheless, our share price experienced downward pressure during the quarter because of our association with the automatic identification industry.*" [Emphasis ours.]

We would add that the internecine carping that we have been witnessing this past year among competitors and their shareholders -- particularly Symbol and Telxon -- doesn't help matters either.

#### In an almost inevitable decision....

....the Board of Directors of FACT -- the Federation of Automated Coding Technologies -- decided, to all intents and purposes, to shut down the 8-year-old organization. FACT is now in what has been characterized as a "dormant" state.

On November 19, faced with the lack of a financial or administrative program to replace the sponsorship that had been provided by AIM/US, the FACT Board decided it had run out of options and could no longer continue the organization in its current form.



FACT had been put on notice that AIM/US would be withdrawing its support by the end of 1992 (SCAN June 92). The FACT Board and officers had come up with a number of different plans to restructure and refinance, but none of them was acceptable.

The decision, fortunately, was not to totally disband, but to withdraw and reexamine the options. A few key people volunteered to spearhead three or four Ad Hoc Committees to look into what was needed for the future and to develop new methods to achieve those goals. Craig Harmon, Gary Ahlquist, Bob McQuade and Bert Moore have agreed to continue to work together on an informal basis in an attempt to bring FACT back to life.

FACT's most important achievements were in the area of standards and, in particular, the establishment of Data Identifiers (DIs). The UCC and EAN organizations have been sponsoring a competitive system -- Application Identifiers (AIs) -- which has been pushing DIs out of some industries. If FACT disappears beneath the surface, DIs may go with it.

From the very beginning, FACT's goals have been ambiguous. It was organized as an unwieldy association of trade associations with almost nonexistent operating funds. It was a user organization that depended on a vendor group (AIM/US) for funding and administration -- an anomaly that was never satisfactorily reconciled.

If FACT is to survive, the challenge will be to switch over to a more vibrant organization with active corporate membership and a clear charter that better reflect the needs of the user community.

#### In a major move....

....which portends many significant changes for the future, Symbol Technologies announced on December 9 that it was restructuring its operations:

- All engineering, manufacturing, sales, marketing, financing and administrative functions will be centralized in its Bohemia, NY headquarters.
- The Portable Systems Division -- what was originally the MSI Data operation, based in Costa Mesa, CA -- will be shut down, leaving only a small (about 40 people) Systems Group operating out of that location. There are 500 employees now working in Costa Mesa. Some may be relocated to New York. Others will be laid off.
- The reorganization is expected to reduce Symbol's worldwide staff by about 200 employees to a new total of 1,900 people. The company predicts that over the next three to five years its roster will increase to 2,800 employees with about 1,750 located at the NY headquarters.
- New York State and the local county and town governments have offered Symbol a \$12 million assistance package (low interest loans, tax and utility abatements, employee training grants) which persuaded the company to stay in the area and to build a new headquarters facility on a nearby 40-acre site.



- The company plans to take an approximate \$34 million pre-tax expense in the current quarter to cover the costs associated with this consolidation, employee severance and restructuring. Upon completion, management anticipates that these actions will result in annual cost savings of approximately \$16 million.

According to Chairman/CEO Jerome Swartz: "This consolidation...reflects the continued integration of bar code laser scanners and portable terminal products." It also appears that this may be the final step in the full integration of the November 1988 acquisition of MSI Data.

#### There was a glimmer of hope....

....for a few days last month, that the difficult impasse involving AIM International might be resolved (SCAN Aug 92, Sep 92, Nov 92).

There were two plans being considered. The first -- advanced by AIM/Europe and AIM/Australia -- retained the existing AIM International organization with additional provisions to admit corporate members on some limited basis, with details still to be worked out. The alternative -- which was conceived and supported by AIM/US and sometimes referred to as the "Halifax Plan" -- established a new organization named AIMI that was limited to direct corporate members only.

In an attempt to reconcile these differences, an informal proposal was put forward in mid-November by Joop Oldenbroek (Leonhard Kurz GmbH, Furth, Germany), a member of AIM/Europe's Council. In effect, the Oldenbroek blueprint -- dubbed the "Bridge Plan" because of its intent to join the two protagonist groups -- allowed both organizations to coexist with a liaison committee to coordinate their activities. Many points remained to be fleshed out, but the idea was to let each organization do what it presumably could do best: i.e., AIM International would be a coordinating body in such important areas as international standards; AIMI would concentrate on the larger challenge of promoting auto ID technologies and developing new markets.

Some key members of the AIM/US Board, who had reportedly seen the Bridge Plan, had found it acceptable. Based on this encouraging development, the word filtered back that AIM/International had cancelled its proposed December meeting in Singapore, which had been intended to regroup the affiliates from around the world to counter the AIMI threat.

In a somewhat surprising development, however, the compromise Oldenbroek Bridge Plan was never formally presented or considered at the AIM/US meetings held on December 1-4 in Fort Myers, FL. Both the Board of Directors and the general membership were apprised of the US-supported AIMI proposal and its goal to establish a direct corporate membership (as opposed to the present AIM International structure as an "association of associations").

None of the specifics of any of these plans was placed on the agenda for a vote. It was considered too complex an issue, at this stage, to discuss at an open meeting. Instead, both the Board and the general membership overwhelmingly passed a vote of confidence to support the decisions of the AIM/US members of the Task Force that was working on the AIM International reorganization. In effect, the membership approved the AIMI concept -- as



described by the original Halifax Plan -- but did not direct the Task Force members about what their next actions should be.

On December 8, we discussed these events with Ivan Jeanblanc, the outgoing president of AIM/US and one of the most active members of the AIM International Task Force. By then, Jeanblanc had already spoken with Oldenbroek about what had transpired at the AIM/US meetings in Florida. Jeanblanc candidly explained to SCAN the situation as he saw it:

"Joop [Oldenbroek] and I were very positive when we had our discussion. The Bridge Plan is not perfect but it is worthy of consideration. There are a lot of details not included -- which is understood. We are trying to organize a meeting in January in Europe, with all of the key Europeans present, in order to set down some details of the Bridge Plan.

"We do not want to see this thing fall apart. The Bridge Plan was not formally rejected by AIM/US. The Task Force was supported. The AIMI approach will continue, which it would under the Bridge Plan as well, so there is really no conflict. No one is closing any doors. I believe it will work itself out."

The situation is far from resolved -- but there's a flicker of light at the end of the tunnel.

#### We were very pleased....

....to present the 1992 SCAN European Industry Achievement Award to the Comite Europeen de Normalisation - Technical Committee 225 Bar Coding. CEN TC225 is now recognized and respected worldwide for its work in bringing together 18 European nations and 13 commercial groups in a common endeavor to establish industry standards for automatic data capture.

The presentation of the 1992 award was made during SCAN-TECH Europe in Paris on November 3, by SCAN's International Editor, Paul Chartier. The special plaque, which was received by Michel Laplane, Chairman of TC225, was inscribed: "CEN TC225 has pioneered the holistic approach to all classes of standards -- from symbologies to generic applications -- resulting in the harmonisation of specifications across 18 European countries and beyond."

By all reports, SCAN-TECH Europe 92 was the most successful such event since the very first European conference in 1984. This was the first time it has been held in France -- all previous venues were in Germany, Holland and Switzerland -- and the 7,000 registrants from 53 countries totalled the largest attendance ever.

#### Persistent rumors had been circulating....

....that a disappointed Bert Moore would probably leave AIM/US as a result of the selection of Steve Halliday as the new Technical Director earlier this year (SCAN Oct 92). Moore, who has been with AIM/US for 8 years, was passed over when the Board brought in Halliday from the outside (GFI, Elk Grove, IL).

To his credit, Moore kept to himself whatever dashed hopes he may have felt and did not voice any complaints. At the SCAN-TECH show, in Anaheim, Moore went



so far as to tell *SCAN* that he accepted the decision and would pursue his new position as Director of Technical Communications reporting to Halliday.

The final outcome of these changes, however, is that Moore has now decided to leave AIM/US at the end of December to start his own company, IDAT (Intelligent Data Acquisition Technology), a consulting and education service for the automatic data collection industry. There are continuing discussions under way about special projects that Moore's new firm may undertake for AIM/US. There has been no decision, as yet, as to *AIM Journal*, the brand new AIM/US publication that was edited by Moore (*SCAN* May 92).

Halliday -- whose technical expertise has been in magnetic stripe -- is now looking for two addition professionals to join the Technology Department at AIM/US. One person would be hired to replace Moore (specializing in bar coding); the other would round out the department by having a background and expertise in RF.

Moore has made many important contributions to AIM and to FACT. He will be missed. We wish him every success in his new role as an entrepreneur. He can be reached at his home/business phone: 412/341-4982.

#### The lines between....

....automatic data capture and RF data communications (RF/DC) are becoming blurred. At *SCAN-TECH* 92, we noted that more and more hardware system suppliers are incorporating both capabilities in their product lines.

- LXE and Teklogix, for example, the two leaders in RF/DC systems, are also marketing portable terminals, a growing proportion of which now include bar code scanning.
- The major portable terminal specialists -- Norand, Symbol and Telxon -- which have included scanning as an integral feature in their units for some time, are now also offering RF/DC.

Among these companies, however, there is still some friction regarding the preference for narrow band versus spread spectrum (S/S) technologies, even though all of them offer both systems. The RF companies, who built their product lines and markets on narrow band, understandably still tend to favor that system. LXE, for example, has been running an insert in the trade magazines ("Narrow Band or Spread Spectrum") which explains the differences and advantages of the technologies. But even this informative 4-pager subtly favors narrow band in most of its comparisons. For instance:

- "S/S systems do not benefit from the [FCC] protection that a [narrow band] license system provides."
- "Users who use certain types of S/S systems will run a serious risk of future interference."
- "Almost all spread spectrum systems that have been installed in the last few years are not compliant with FCC rules that changed in 1990."

**SCAN  
TECH  
1992**



The issue of whether S/S systems comply with the new FCC regulations, (which take effect in June 1994) continues to percolate (SCAN Aug 92). LXE is guaranteeing that all S/S equipment that is sold by them today already meets the new FCC requirements.

Symbol Technologies, according to VP Marketing Rich Bravman, is about to introduce its next generation of S/S units, which not only comply with the FCC regs, but are also 100% compatible with all of their units that have been sold to date. Bravman told SCAN in Anaheim: "Any Symbol spread spectrum unit that has to be replaced or expanded after 1994 can be accommodated with these new units which will be in full compliance. The new units are out of engineering, have received FCC approval and will be marketed soon."

As for the estimated market penetration by spread spectrum, Bravman estimates that S/S will control 80% of the new RF/DC installations within the next few years. The only other company that agrees with that estimate is Telxon. Mike Grimes, Telxon's Marketing Director, feels that the higher data transmission rate and ease of movement makes S/S an overwhelming choice for the future.

One of the salesmen at the Norand booth, on the other hand, predicted to SCAN that not more than 20% of the market will shift to S/S. He believes that those who are buying it today are just impressed with the thought that they are at the "leading edge of technology with the latest toy."

Mike Dunn of Teklogix takes a neutral stance. He says that his company is still shipping mostly narrow band, but that S/S is gaining a great deal of interest and attention. "It's going to be two or three years," Dunn asserts, "before we can tell whether or not spread spectrum is a proven application."

Telxon is betting heavily on the importance of RF/DC and, specifically, on the spread spectrum technology. At SCAN-TECH 92, the company introduced a range of portable wireless data collection products that support or link into Telxon's DATASPAN 2000 spread spectrum frequency network. These wireless units included: pen-based computers; palm-sized portable computers with integrated laser or CCD bar code scanners; and wearable wrist computers with integrated laser scanners.

Telxon's major success with S/S systems was highlighted by the completion, in less than 8 months, of the installation of its DATASPAN 2000 network into all of Wal-Mart's 1,804 stores.

Whether moving data a foot or a mile, to a peripheral device or a host computer, RF/DC is fast becoming a major component of all auto ID systems.

#### And finally....

....winding up our coverage of SCAN-TECH 92, here are a few additional items that caught our attention:

- Welch Allyn introduced its 3600 Series, compact, fixed mount, non-contact, CCD bar code scanners, designed primarily for sale to OEM customers. The unit, list-priced at \$600, has a focal length of up to 1.25" with a 1" depth of field. Welch Allyn is the only manufacturer of CCD barcode scanners in the US. The company, which manufactures CCD arrays for its medical equipment products, also introduced a hand-held

**SCAN  
TECH  
1992**



CCD bar code reader earlier this year.

- Spectra Physics, which first showed its new, very small, point-of-sale SP\*ACE scanner at SCAN-TECH 92, completed a major sale of these units to Camelot Music, a 300-store national retail chain. Full implementation -- which includes Spectra's SP400 laser guns -- is expected by March, 1993.
- C.Itoh demonstrated a multi-pass thermal ribbon for its Model CT-40/60 thermal transfer printer. (A similar product was introduced by Ricoh at SCAN-TECH Europe in Paris.) According to C.Itoh, a proprietary combination of wax and ink allows for a minimum of five passes of the ribbon before it wears out. Since this ribbon costs only twice the amount of a standard one-pass ribbon, the savings could be significant.
- Telxon has teamed up with ARDIS (a joint venture of Motorola and IBM) to offer a unique plan that allows field service organizations to test the power of hand-held microcomputers and wide area wireless data networks. Telxon introduced a "Starter Kit" that provides all of the elements necessary to preview the features and benefits of a self-contained dispatch and call management system.

For a nominal fee, customers can choose a package that includes either 25 or 50 hand-held microcomputers, a host PC computer, off-the-shelf field service application software and 90 days of unlimited usage on ARDIS, the first nationwide, wireless, area data communication network. At the end of the test period, customers can return the equipment and determine whether or not to install a custom-tailored system.

- Launching three new publications at the same time is a daunting challenge that not too many ordinary mortals would undertake. To meet the deadline (SCAN-TECH 92) and to produce outstanding quality in the very first issues is an astonishing achievement.

Our hats are off, therefore, to Doug Edgell, Georgia Colicchio and their staffs for: *Consumer Goods Manufacturer*, *Data Capture Reseller* and *Retail Systems Reseller*. We found that all three of these publications included well-written and carefully researched articles on technical and marketing subjects. The material and execution would be worthy of magazines that had been around for many years with large staffs and deep pockets -- not all of which are readily available to Edgell Enterprises. It was reassuring to see the strong advertising support evident in these premiere issues.

#### You may have noticed a new bar code....

....at the bottom left of our front page. It is called the SISAC Symbol and stands for Serial Industry Systems Advisory Committee, which developed the code and symbol. The SISAC symbol, which was designed for professional periodicals and scholarly journals, is gaining widespread acceptance. Its primary purpose is to help librarians track the movement of these serials. S

The Code 128 symbol incorporates the publication's ISSN (International Standard Serial Number), date of issue and volume/issue number. Thus, this bar code will change each month to reflect the new date and issue number.

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