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The somewhat ingenuous statement....

....issued six months ago by Terry Van Der Tuuk, President of Graphic Technologies, Inc., that he was taking steps to explore the possibility of having someone acquire his company so that he could be a "better manager and get help in expanding GTI's market," (SCAN Mar 89) -- has proved to be not so naive, after all.

Van Der Tuuk advised SCAN on August 31 that he had just sold his company for $56 million -- at a per share price of $18.50. The buyer is a yet-to-be-named large foreign corporation ("with deep pockets") which is looking for other acquisitions in similar technologies. Van Der Tuuk's personal share of the sale will come to about $18 million. He was quick to point out that he had purchased the company for only $25,000 just 11 years ago (when GTI was losing money on sales of $780,000).

[As we go to press, the pending agreement is still subject to various conditions and approval by the boards of directors of both companies.]

Ironically, fiscal year 1989 was not one of the strongest periods in the company's recent history:

GRAPHIC TECHNOLOGIES, INC.	12 Months ended 6/30		3 Months ended 6/30	
	1989	1988	1989	1988
Revenues ($000)	$29,075	$25,664	$7,637	$7,377
Net Earnings ($000)	2,371	2,215	645	633
Net Earnings/Share	.83	.78	.23	.22

Van Der Tuuk optimistically reported: "This represents the 14th consecutive quarter the company has achieved comparative earnings and sales gains." [What he failed to insert was the word "barely"]. While he went on to express pleasure with his company's sales increases of bar coded products, he also pointed out: "Gross margins for the quarter were adversely affected by increased competition for continuous form pressure sensitive labels. However, we expect gross margins in the coming year to show significant improvement over the fourth quarter."

With his newly acquired financial resources, Van Der Tuuk says that he now expects to aggressively pursue profitable new products and markets to achieve an even better performance in the coming years.

<u>"Making the transition</u>....

....from a hardware to a systems company is not easily accomplished," declared
Ray Meyo, President/CEO of <u>Telxon</u>, as he reported disappointing results for the
first quarter of fiscal year 1990 (ended 6/30/89).

The company seems to be encountering marketing and operational problems which
have adversely affected its performance to a greater degree than anticipated.
At the end of the last fiscal year (March 31, 1989), Meyo had issued statements
which were meant to prepare shareholders and investors for a poor showing for
the first 6 months of this year.

The first quarter results, however, seemed a bit worse than expected. Earnings
were down substantially (or "plummeted," as *The Wall Street Journal* headlined
its report) to $557,000 -- or $.04 per share, compared to last year's $3.4
million -- or $.26 per share. Total revenues were up only 2.6% to $35.3
million, and (significantly, we thought) all of that increase was attributed to
sales from field service activities -- while product sales were actually down
$700,000, as compared to the same quarter last year.

A few months ago (*SCAN* June 89), Meyo had cautioned that he expected "a
year-to-year earnings decline for the first 6 months" of this fiscal year,
because of the transition costs obligated to converting Telxon from a hardware
to a systems company. At that time, he emphasized the short-term nature of
this changeover and optimistically stated that demand for Telxon's products
would continue to increase.

For the past two years, Telxon's focus, and the commitment of much of its
resources, has been on the retail automation market, which comprises 40% of its
current revenues. Its own recent market research study had concluded: "Demand
will be strong, over the next several years, among grocery, drug and mass
merchandise retailers for fully integrated systems." To help meet that demand,
Telxon had acquired two companies (Information Management Group and Real-Time
Computer Specialists) with software packages for retailers -- an important
component to the firm's systems approach.

Telxon's sharp decline in earnings is now attributed to what the company refers
to as "operational" problems. As Meyo puts it: "While we have made some
operational changes in recent months, our structure and functions still do not
adequately reflect Telxon's systems orientation. They continue to support the
smaller average sales, simpler software development process and shorter sales
cycle of Telxon's hardware business."

The CEO's most recent statement is a somewhat significant change from his
previous position (that the weak earnings would only last for the first two
quarters of this year). Meyo commented: "Relatively flat revenue growth
and earnings below last year's levels are expected to continue through fiscal
1990, as we concentrate on implementing operational improvements and refining
market strategies for both hardware and systems solutions." Meyo has now also
conceded that Telxon has been reducing some of its prices (a point which he
denied in an interview with *SCAN* three months ago).

The stock market reacted quite negatively, and the share price dropped to as
low as $9, a more than 60% decrease in the market value of the company from
this year's high of $24 3/4.

COMMENT

Is Telxon in trouble? We doubt it. Although Meyo may have underestimated the time it would take to convert the company's management, marketing and operations personnel to a "systems" rather than "hardware" orientation, there's every reason to believe the decision was a sound one. Meyo is holding fast to the long-term outlook for his company and continues to maintain his position that the flat revenues, increased costs and reduced earnings are short-term phenomena.

Ironically, a small part of the investors' disappointment in the company's current performance may also be due to the expectation, after MSI (Telxon's major competitor) was acquired by Symbol Technologies last year, that Telxon would have been out in the market gobbling up all of the new installations, while the newly merged companies were in the throes of reorganization.

Both companies (Telxon and MSI) have targeted calendar 1990 as the year when the market for portable transaction computer systems will grow significantly, affording each company the opportunity to move aggressively into the future. Now, if only the economy will cooperate....

The neat turnaround....

....accomplished by Imtec has resulted in a profitable year, with revenues up almost 25%:

IMTEC	12 Months ended 6/30		3 Months ended 6/30	
	1989	1988	1989	1988
Revenues ($000)	$5,441	$3,580	$1,858	$1,076
Net Earnings (Loss) ($000)	360	(38)	101	30
Net Earnings (Loss)/Share	.31	(.03)	.10	.02

Jim Williams, Imtec's President/CEO, believes that the company's decision to open new regional sales offices has begun to pay off with increased sales of industrial bar code equipment and consumable printing supplies and labels.

We welcome comments to our articles....

....even those which come from disgruntled readers who feel we have not given them a fair shake in our reporting.

Take, for example, Carlo Pastore, Director of Sales and Marketing for Vertex Industries of Clifton, NJ. After reading about the introduction of bar coding into the Massachusetts Lottery System by Welch Allyn (*SCAN* August 89), Pastore wrote to advise us:

"The purpose of this letter is to correct statements in your August, 1989 issue that are erroneous, misleading, and do an injustice to Vertex among others. Vertex Industries has been providing bar code solutions to the lottery industry for over two years. There are currently systems installed

in the State of Maine, and Florida was installed this summer. Clearly, Welch Allyn has not 'introduced bar coding into the lottery industry.'"

Strictly speaking, Pastore is absolutely correct. Welch Allyn and the Massachusetts Lottery Commission had overstated their breakthrough in lottery scanning by claiming they had introduced bar codes to the lottery industry. In fact, Vertex has supplied bar coding scanners for Maine's lottery since 1987, working through Scientific Games Inc. (a major supplier of lottery systems). In Maine, the scanners are used at a central validation center to which winning tickets are mailed and randomly verified.

On the other hand, Massachusetts does seem to have pioneered the installation of bar code readers at each lottery <u>retail</u> <u>center</u>, for on-line, real-time checking at the moment the winning tickets are presented for redemption.

[We were also taken aback when we learned that the information about the award itself was somewhat inaccurate. This report was provided jointly, last month, by Welch Allyn and the Massachusetts Lottery Commission. It turns out that the State of Massachusetts has not yet finalized the contract award, even as late as September 1st, when we last checked.

The State Purchasing Department, we were advised by Purchasing Agent Madeline Carreia, still has the bids "under review." In a clarification, Chet Benoit of Welch Allyn told *SCAN*: "Welch Allyn is the successful bidder or 'Vendor of Choice' by the Lottery Commission, but the actual award process has been frozen pending the resolution of other contingencies and technical details." Benoit confirmed that his company has already delivered operating units under the pending contract, and he left no doubt that he believed that Welch Allyn would eventually receive the formal award.]

When we contacted Carlo Pastore to ask about the origins of lottery scanning, he explained that Vertex and SGI had done a great deal of original research on the design of the scanners intended for this application. Pastore also noted that they developed special techniques for printing the bar codes on the multi-layered, "scratch-off" cardboard lottery tickets (no mean task, in itself). Special bar code algorithms, with encrypted check digits, were also devised to further inhibit fraud.

In the end, everyone involved in this story agrees on one thing: If the plan is successful in Massachusetts, lottery systems could develop into a very large market for bar code scanning.

Although they expect to lose....

....this round in the bidding for the Massachusetts Lottery contract, <u>Vertex Industries</u> has been successful in another very interesting auto ID application that has significant potential.

As a result of the scourge of drugs and crime in urban schools, a great deal of effort is being expended to improve security. One major problem has involved the control of the entrances and exits at each school, to be certain that only authorized students and personnel are allowed to enter. A secondary -- but related -- problem was to find a way to improve the current antiquated method of taking attendance. All students are now required to start the day at

Home Room, where teachers take attendance manually, using the time-honored attendance sheets which are then sent down to the front office.

According to Carlo Pastore of Vertex, school officials in New York City decided to do something about these problems by introducing an automated system to help control security and to improve attendance-taking methods.   In five high schools scattered among the boroughs of Manhattan, Bronx, Brooklyn and Queens, each student, during the 1988-89 school year, was issued a bar-coded identification badge.

> At every school entrance, each badge must be inserted by the student for verification in a badge reader. If all's well, the CRT screen will display a general message, such as: "Good Morning"; or a more directed message, like: "Bill, be sure to see Ms. Jones in the Math Department at 2:00 o'clock today." If the card was stolen, or was presented by a student who was suspended (or otherwise not authorized to enter), the scanner keeps the card and an audible alarm goes off.

A typical New York City school, of 2,000-4,000 students, required about 10 to 15 such scanning units, tied into two host PCs. Because the cost and time to install new wiring in these schools was prohibitive ($15,000 and 6-9 months), the system designed by Vertex operates through the building's internal power lines. This hookup permits flexibility in moving the scanning units around, as needed, to any place in the school. It also allows for easy unplugging and storage in locked areas overnight.

The five-school test has been successful, according to Pastore, and an additional 45 schools will be up and running during the coming school year. Vertex's 5-year contract calls for 115 more schools to receive installations in the 1990-91 school year, followed by 260 junior high schools in later years. The budget for each school runs $40,000-$60,000, of which about 75% is allocated to the Vertex scanners. The prime contractor handling the New York City contract is Logon, a Vertex distributor and systems integrator based in Teterboro, NJ.

Vertex Industries, Inc., Box 996, Clifton, NJ 07014-0996; 201/777-3500.

We were very disappointed....

....to learn that _Identification_ _Journal_ (IDJ) has ceased publication with its June/July issue. In July, _IDJ_ sold its circulation list to _ID Systems_ (owned by Helmer's Publishing).

We asked _IDJ_ Publisher David Hackmeister (President of Marking Devices Publishing Company in Chicago) why he made this drastic decision. "I gave the magazine my best shot," he replied, "but I had reached my maximum budget investment and felt I had to withdraw support."

> [It was certainly evident that recent issues of _IDJ_ have been getting thinner and thinner, with fewer advertisers and only sparse editorial material. In its 6-year history, the magazine took strong, but fair, editorial positions that were sometimes critical of the industry, and there has been speculation that these stands may have turned away potential advertisers.

One example was *IDJ*'s evaluation of the AIM Technical Symbology Committee Bar Code Performance Test (*SCAN* May 88). In its editorial, *IDJ* noted what it felt were the inadequacies of the study. The journal went further and commissioned Leon Cox, New Mexico State University, to write an analysis of the results. Cox's report, which was not particularly kind to the TSC study, concluded: "Common experimental design and implementation factors are not adequately answered by the AIM Symbology Test."]

In *IDJ*'s final edition, the publisher included a readers' survey, in an attempt to discover which features his subscribers were particularly interested in and which subject areas they would like to see covered in greater detail. This move was obviously too little and too late to affect the final decision.

COMMENT

In our opinion, Identification Journal had two special things going for it. First, it provided a forum for articles about some of the more technical issues confronting auto ID -- an outlet that this industry sorely needs. Secondly, the editors spoke their mind and took a balanced approach to the industry's news. There are some advertisers who may have felt that even-handed reporting -- which doesn't insist that everything is great and that the outlook is always rosy -- is not what they want the public to read. Hackmeister's reply is that such individuals maintain "a short-term perspective," which doesn't allow for the realistic criticisms or negative comments which will ultimately benefit the entire industry.

Auto ID needs a technical journal to address the issues of R&D, engineering and standards that are critical to its growth. ID Journal ultimately failed in its attempt to fulfill that mission. We can only hope that ID Systems, Auto ID News or AIM will pick up the challenge.

In the process of reaching out . . . .

. . . .to the European market for auto ID products -- which recent studies estimate will approach $2 billion in the early 1990's -- AIM-Europe is heavily promoting its upcoming SCAN-TECH Europe 89.

This year's venue will be the Netherlands Congress Centre in the Hague on November 7-9. In addition to seminars on the basic technology, notable "stand-alone sessions" are scheduled to cover health care, office stationery and Quick Response.

Appropriately, special attention will be given to the European Economic Community and the implications of EC-92 -- The Single European Market. The opening session will be built around a keynote speaker (as yet unnamed) who will appear on behalf of the EEC Commission. The auto ID industry's position on EC-92 will be reviewed by Paul Berge, VP Symbol-MSI and the founding President of AIM-Europe. On Day 2 of SCAN-TECH Europe, the important seminars on standards will be introduced by Chet Benoit (Welch Allyn), Chairman of AIM/US.

With Netherlands as the setting for this trade show, nothing could be more appropriate than a visit to a flower auction in Aalsmeer, where bar coding and scanning are used to identify and price every plant tray before leaving the premises. Other site visit possibilities include a large hospital and an

airport. Almost immediately following SCAN-TECH Europe, SCAN-Denmark is scheduled for November 22-23 at Odense.

AIM-Europe has also initiated preliminary plans to conduct a market research study of the Comecon countries. A letter, outlining this project, will soon be sent to all AIM members worldwide. A draft of this letter (currently out for comment) describes the background for the study as follows:

"Preliminary unofficial surveys show that the sales of West European, American and Japanese companies in the East European market, have soared in the last five or six years, reaching a volume of millions of dollars of value each year. Some Comecon countries have now started their own automatic identification media and software production, and so it is expected that this tendency will grow through to the mid-1990's. AIM Europe has now requested that Dr. Peter Glattfelder, head of the AIM Europe Comecon branch office in Hungary, should prepare a report on the pattern of the Clarendon document covering Eastern Europe." (For additional background on the original Clarendon report, which covered the West European market, see *SCAN* Feb 87).

One proposed method to gather the information for this study is to survey all AIM members about their current and projected sales to the Comecon countries. (According to the AIM-Europe letter, these responses may be anonymous "because of the possible sensitivity of some of the questions.") To make this study a success, Dr. Glattfelder is counting on support from the members of all AIM affiliates throughout the world.

AIM Europe, the Old Vicarage, Haley Hill, Halifax HX3 6DR, ENGLAND; UK 'phone 422-59161.

The two-dimensional code sweepstakes....

....has just had another entry -- but we're not sure exactly why. The new symbology is named "Code à Block" and was introduced by Identcode-Systeme (Neu-Anspache, West Germany).

The company's President, Heinrich Oehlmann, who is the inventor of this new symbol, sent us his explanation: "Of course," Oehlmann writes, "there are some [two-dimensional stacked] symbologies already available, like Code 49, introduced by Dave Allais last year, or Code 16K, developed by Ted Williams, but there is an urgent need for something easy right now. 'Easy' means working with 'off-the-shelf' printing technology and 'off-the-shelf' reading technology."

[Before starting Identcode-Systeme, Oehlmann had founded and operated Intermec, Gmbh (Intermec's independent distributor in Germany) from 1981 until early 1987. When Intermec bought out this distribution operation, Oehlmann left to start up his own company]

Oehlmann's approach in designing Code à Block is to incorporate elements of Code 39, Codabar and Interleaved 2/5 -- in order to include the best alpha-numeric and high-density features of each, while also staying with established symbologies that can be printed and scanned with existing hardware. What we have not been able to determine, as yet, are the advantages that Code à Block offers when compared, head-to-head, with Code 49 or 16K. Specifically:

- Does it yield higher density?

- Does it have a better/faster/more accurate read rate?

- Will it adapt more readily to existing printing equipment?

- Will it result in a less expensive system -- both in initial costs and continuing operations?

Until those questions are answered, we can only report that Code à Block is here, but we can't guess where it might be headed.

ICS Identcode-Systeme, GmbH, Langgasse 22, D-6392 Neu Anspache, WEST GERMANY; phone: (0 6081) 7091.

Last year's innovative conference....

....designed to keep the financial community abreast of the investment opportunities available in the auto ID industry, will be presented again this year by Data Capture Institute and its President, David Collins.

As with the 1988 program, Auto ID Finance 89 will coincide with SCAN-TECH 89 (at the Fairmont Hotel in San Jose). This year it will be held on October 17 -- the first day of SCAN-TECH.

Collins expects 35 to 40 security analysts and corporate development officers to sign up. Presentations will be made by the Chief Executive Officers of six public and two private companies from the auto ID industry during which they will describe their corporate objectives, recent performance and forecasts for the future.

So far, the schedule includes five public companies: Intermec, Burr Brown, CheckRobot, DH Technologies and Photographic Sciences (PSC); and the privately-held firms, Amtech (an RF company) and Norand (which completed its leveraged buyout a couple of years ago). The remaining public company will be announced shortly. The cost is $495. Data Capture Institute, Box 1625, Duxbury, MA 02331; 617/934-7585.

The worldwide commitment....

....to retail automation continues apace with the recent admission of Chile, Uruguay and Hong Kong to the EAN community.

These additions bring the total to 47 countries that come under the UPC/EAN umbrella. A number of years ago, the Brussels-based EAN Council decided to allocate 3-digit prefixes to national organizations (as opposed to the 2-digit country codes that were assigned to the original members back in the 1970's). This has proven to be a wise decision, since it provides a reserve bank of over 400 numbers, which should be enough for the rest of the world for the foreseeable future.