



newsletter

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The management
Newsletter for all
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with bar-code
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Ciba-Geigy has found a new home....

....for Spectra Physics after a much-publicized effort to sell the division (*SCAN* Jan 90). The buyer is Pharos, listed on the Stockholm exchange and 75% owned by the Swedish-based conglomerate, Nobel Industries (1989 sales of \$4.3 billion).

Pharos (1989 earnings of \$27 million on sales of \$238 million) is basically a holding company which owns 6 operating businesses, which it characterizes as "niche-oriented, high technology companies specializing in electro-optical, fine mechanics and low-level analog signal processing technologies." Although the terms of the acquisition were not disclosed, the *Wall Street Journal* estimated the purchase price to be \$325 million.

Spectra, based in San Jose, CA, the leading producer of lasers, laser systems and chromatography instrumentation, is the world's largest supplier of the slot-type, bar code laser scanners for retailers -- mostly supermarkets. Sales in 1989 were \$324 million (no earnings figures have been made available).

Ciba-Geigy, the Swiss-based giant manufacturer of pharmaceuticals, acquired Spectra Physics for about \$270 million in 1987. Three years later, after the drug company decided to stay with the businesses it knows best, Spectra was put back up for sale. Ciba conducted, in effect, an international auction for Spectra. An offering memorandum was prepared and 30 to 50 companies were reported to have expressed initial interest. Respondents willing to sign a nondisclosure agreement received the memorandum, and the group was whittled down to a short list.

We are not privy to the final selection process, but the decision went to an aggressive, prestigious, fast-growing company. Dr. Ulf J. Johansson, Pharos' President and CEO, stated: "We have a strong track record of investing for the long term to build profitable high-tech businesses, and we fully intend to do the same with Spectra Physics." Interestingly, while Dr. Johansson works out of corporate headquarters in Sweden, Chairman Lawrence Karlson and CEO Patrick Edsell are based in the US. The acquisition of Spectra Physics is the third important takeover by Nobel reported in just one month. Of this trio, Spectra is the second company acquired by Pharos.

There were indications that some of Spectra's employees had been tentatively looking around for new employment during the last couple of months. Pharos seems to be making every effort to reassure the staff that it will keep the organization intact in order to further develop the company's potential.



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INCLUDING THE INTERNATIONAL EDITION

To hear one market analyst describe it....

....Intermec may be committing the crime of the century. "The company is hiding from the Street," remarked this financial guru, in an interview with SCAN near the end of May, "and until we have our calls returned, explaining their disappointing earnings, I'm telling my people to stay away from the stock." Intermec dropped 4 1/2 points to \$18 1/4 on May 23 and was down to \$17 by the end of that week. That's a 25% loss in just a few days. (The stock has traded as high as \$34 this past year.)

And what was the disappointing performance that bothered Wall Street?

<u>Intermec</u>	<u>12 Months ended 3/31</u>		<u>3 Months ended 3/31</u>	
	<u>1990</u>	<u>1989</u>	<u>1990</u>	<u>1989</u>
Revenues (\$000)	\$168,481	\$131,112	\$46,090	\$40,263
Net Income (\$000)	11,515	8,036	3,652	3,077
Net Income/Share	1.51	1.14	.43	.43

These numbers really don't look too bad. There was a gain during the year of 28.5% in sales and 43% in profits, and for the final quarter, revenues were up 14% and earnings 19%. (Percentage increases in earnings per share vary because of the increase of 1.2 million in the number of shares outstanding, as a result of the stock offering in December, 1989.)

So what was the problem? We interviewed three financial analysts who follow the stock and their stories were consistent. Management had recently "endorsed" fourth quarter earnings forecasts of \$.48 to \$.53 per share. No one from the company ever called, however, to warn these analysts that profits would come in lower than anticipated (at \$.43) or to explain why it happened.

Secondly, the cutback in the Department of Defense LOGMARS procurement has affected current sales and this reduction is expected to continue indefinitely. A major *Wall Street Journal* article, on May 24, headlined, "Military Contract Haunts Intermec," reported that the company's LOGMARS revenues were \$2.3 million in the fourth quarter, rather than the \$3 to \$3.5 million expected. One analyst admitted to us that this concern was ludicrous. Since Intermec has always pointed out that its profitability on the hardware supplied to the DOD is lower than its earnings from commercial business, this comparatively small loss of revenue didn't seem to warrant such an extreme reaction.

COMMENT

If our readers are waiting for an explanation from us, it will not be forthcoming. We do not tout any stock nor do we render any investment advice. We only lament the constant myopia of the US investment community which watches quarterly reports and spins and trades for short-term gain.

Intermec's problems with the Street seem to be based on the fact that, in the past, management has been very open and forthcoming about the company and that now it appears to have clammed up at the first signs of difficulty. Intermec, on the other hand, seems to feel that it has been ill-treated by rumors and unfounded negative reports and may find it best to just let the company's performance speak for itself.

[In mid-April of this year, 19% of the total shares of Intermec were reportedly still in the hands of the short sellers (SCAN Jan 90). We haven't heard any recent complaints from them.]

The issues were clearly set forth....

...in the long-running Symbol Technologies patent suit against Opticon. Symbol (the plaintiff) alleged that Opticon (the defendant) infringed three of its patents relating to laser scanners; Opticon denied infringing and counterclaimed that the three patents were "invalid and unenforceable."

The Court's final decision, handed down in New York on May 3, 1990, was unequivocal and left no room for any doubts: "The Court finds that defendants infringed plaintiff's patents. The Court further finds that defendants have failed to prove by clear and convincing evidence that the contested patents are invalid as obvious or were obtained through fraud."

These claims of the parties involved and the ultimate ruling by the judge were stated on pages 1 and 2 of the Court's decision. But the balance of the 57-page document contained some fascinating passages detailing how Judge Kimba M. Wood reached her verdict. Several experts who have read the document also believe that the judge's findings may have future implications beyond the Opticon case itself.

First of all, based on the evidence presented, the wording of the decision was so absolute in favor of Symbol's position as to leave no opening for others to step through. The Court did not credit any single position of Opticon as being credible or with foundation, and it reinforced the majority of the claims on all three patents in question.

Secondly, Judge Wood seemed to go out of her way to question the credibility of Opticon's witnesses (including the testimony of the company's "experts"). She particularly singled out Opticon's most important witness, Harry Knowles of Metrologic, when she wrote (Page 18): "The Court is not convinced that Mr. Knowles' recollection of events is accurate and does not credit his testimony." (Page 21): "The Court does not find Mr. Knowles' testimony to be credible." (Page 23): "As with other aspects of Mr. Knowles' testimony discussed infra, the Court has serious reservations about key elements of his testimony and the accompanying demonstration." Two industry observers, who closely followed the trial, have told *SCAN* that they feel that these harsh comments might have a significant effect (in Symbol's favor) on the similar legal action Symbol has pending against Metrologic. (See below for Metrologic's latest reaction.)

Finally, and possibly the most unexpected and bizarre result of this decision, there were rumors floated on Wall Street -- totally unfounded, as best as we can determine -- that the strong affirmation of Symbol's patent position made the company a prime candidate for acquisition by a larger company. According to one financial analyst, it was these rumors that fueled the jump in Symbol's stock price during the latter part of May. No one has emerged as the acquiror and, although Symbol issued their standard "We-do-not-comment-on-takeover-rumors" statement, there is no evidence of any such contact.

The consensus of those industry-watchers we have spoken with is that Symbol's position in the industry will be further strengthened by the court's patent decision: customers will be reluctant to purchase equipment from sources

which may be subject to litigation for patent infringement; the recent price pressure on laser guns -- which has tended to reduce Symbol's margins -- may be relieved; and Symbol can turn more of its creative and management attention from the courts to the laboratory and the marketplace.

[In a move to further strengthen its management team, Symbol has just named Jack Lieberman as president of its Laser Scanning Division. Lieberman, with Hewlett Packard for 22 years, is expected to allow corporate President Ray Martino to "focus on revenue generation and overall direction of the company."]

The effects of the Court's patent decision....

....in New York were immediate and dramatic. Following the judge's May 3 ruling, Symbol had sent out "cease and desist" letters to the distributors of Opticon and Metrologic products.

On May 25, Harry Knowles threw in the towel. SCAN has obtained a copy of the letter he wrote to Metrologic's distributors, which reads, in part:

"We and our attorneys strongly disagree with Judge Wood's findings of fact and conclusions of law. We believe her decision was based upon an incomplete presentation of the facts...Nonetheless...we have decided to immediately discontinue the further sale of any of our present '90 Series of hand held scanners. Within the next few weeks, we will be stopping the production of all of the '90 series."

The letter continues: "We are developing a new range of [900 Series] hand held scanners which surpass the present technology ...[and]...have established the following schedule: July -- Soft tooled prototypes; October -- First hard tooled production samples; November -- Full production."

And then on May 30, Symbol seems to have taken the final step to complete their legal housecleaning. They announced that they had commenced action against Photographic Sciences, claiming infringement of their patents. PSC was the only remaining manufacturer of hand-held laser scanners which had not been sued by Symbol. [NCR was served with legal papers soon after that company introduced their omnidirectional laser gun at the Quick Response show a few months ago (SCAN March 90).]

Unlike the others, however, PSC owns several patents of its own that cover aspects of hand-helds. According to President Mike Hone: "We feel strongly that Symbol Technologies had erred in commencing this action [and] we have referred the matter to our patent litigation counsel."

[PSC's Patent No. 4,603,262 (7/29/86) "Optical Device for Detecting Coded Symbols" -- applicable to infrared scanners and sometimes referred to as the "Spotting patent" -- covers a "visible marker beam" to help position the laser scan.

Patent No. 4,652,750 (3/24/87) with the same title, covers "A bar code scanner having a housing...assembled as a unitary structure upon a printed circuit board so that the entire structure can be located in the housing."]

The apparent economic opportunities....

....for US companies in Europe should not be viewed as ready-made opportunities for amateurs -- despite Mr. Gorbachev's blandishments. The imminent emergence of the European Community and the spectacular demise of communism in Eastern Europe cannot be taken as a signal to rush into these markets without careful and informed preparation.

[The potential is not to be denied. In 1988, the Greater Western European Community -- comprised of the 12-nation European Community plus the 6 countries belonging to EFTA -- totalled 411 million people generating \$5.5 trillion in total output of products and services. The Eastern Europeans (excluding the USSR), with 136 million population, had a gross national product of \$1.1 trillion. (Compared to the US, with 246 million in population and a \$4.8 trillion GNP.)]

The aim of EC-92 is to eliminate physical, fiscal and technical barriers in Western Europe (SCAN May 89; Dec 89). This goal does not suggest, however, that goods and services will flow freely and smoothly between and among the 12 member-nations on January 1, 1993. They will be struggling for many years to sort out internal differences, and they may not be sympathetic to the requirements of companies from outside of "Fortress Europe."

First consider the following complexities with regard to Western Europe:

- There has already been increased direct investment in Europe by non-Europeans, particularly US and Japanese companies. [In January, 1990, of all merger and acquisition activity in the EC countries, 16.2% (\$624 million) was by the Japanese; 3.4% (\$136 million) by American companies.] The objective of much of this financial activity has been to consolidate resources and to establish operating bases within the Community. The costs of locating additional suitable candidates and effecting such mergers has become more expensive and more difficult. According to Barry Hawk, a professor at Fordham Law School, writing in *The New York Times* (May 6, 1990): "The regulatory path is not an easy one. Parties must weave through a thicket of overlapping antitrust laws, filing requirements and waiting periods."
- No one can predict, with any degree of certainty, the effect of the wide disparity of economic and demographic forces within the 12-nation European Community. The average hourly wage, for instance (in 1988, in US dollars), ranges from \$18.07 in West Germany to \$2.73 in Portugal. This will inevitably result in certain shifts in production facilities from the high-cost to the lower-cost production countries. In the UK, as another example, 3% of the workers are in agriculture, whereas 29% of Greeks are farmers.
- The Technical Committees charged with establishing standards and specifications for automatic identification products are just now being formed. They do not include any representation from outside the 18 EC and EFTA countries, and they can be expected to devote their energies to reconciling all differences within the group. The extent to which this process may exclude outside sources may even be looked upon by some members of these Committees as an added advantage.

On the other hand, the economic vacuum left by the deposed Communist regimes in Poland, Hungary, Czechoslovakia, Rumania, Bulgaria and East Germany cannot be readily filled by investments of western capital and know-how. At a recent series of workshops, some leading East European economic reformers posed the following questions which express their fears during this period of transition:

- How do we develop a free market system without returning to the excesses of 19th century capitalism?
- How do we transfer ownership of government-owned facilities to private hands?
- Since there was no unemployment with Communism -- and, by and large, people accumulated no savings or resources -- how do we now help those who may be forced out of their jobs under the new competitive systems?
- How do we deal with people going hungry -- no one actually starved under Communism?

Investing in Eastern Europe may entail risks due to the potential political and economic instability of certain countries and the possibilities of expropriation, nationalization or confiscation. Some countries currently require governmental approval and impose restrictions on foreign investment and on repatriation of investment income and capital.

The fact is that so-called "hard currency" is just not available from these newly democratized countries, which are not yet certain that they want to assume the burdens of capitalism, even while they are enjoying their new found freedoms. Many Eastern Europeans are only now beginning to recognize the drawbacks of capitalism -- longer and harder workdays, layoffs, and social divisions between the rich and the poor. And even for the successful foreign investor, a big problem remains: "How do I take my profits out of the country?"

As for automatic identification, it may appear to be a sexy technology to the East Europeans, and it may attract a great deal of attention -- but it cannot compete with the essential requirements for food, fuel, transportation and a totally neglected infrastructure. Except for a few special situations, we expect that any significant return on investment from Eastern Europe will require deep pockets, patience and extended staying power.

Any new non-European investor, therefore, would be wise to enter these markets -- East and West -- only with established, experienced local partners who have proven track records in the same or closely related technologies. Ronald Beatson (Director General of the European Association of Advertising Agencies) put it this way, when referring to 1992, in his address to the American Association of Advertising Agencies: "In the long run, free trade benefits everyone; but, in the short run, it is bound to produce pain [and]...only the fittest industries will survive."

We were able to gain....

....additional insight into the Eastern European market for automatic identification technology when we attended SCAN-HUNGARY on April 23-24. [At the previous scanning conference in Budapest two years ago, MacDonald's had not yet opened and shopping queues were in evidence at most shops. This year, Big Macs and fries have become part of the culture and the only line of shoppers we saw were waiting to buy a new shipment of Adidas sneakers.]

- The major impetus for bar coding in the Eastern European countries was

-- and remains -- the placement of the EAN symbol on products destined for western retailers. The installation of retail scanning within this region is still in its infancy.

- The EAN agencies are generally controlled by the Chambers of Commerce or other government ministries, but administrative responsibilities are expected to switch over to private not-for-profit agencies as the governments undergo change. No one is certain as to when this transition will occur, or how it will affect progress.
- Eastern European retailers are attracted to the benefits of scanning, and a significant market could develop over the coming years, some of it due to special circumstances. One example: new Hungarian tax laws may require that as many as 100,000 new cash registers be installed to accurately record customer purchases. Presumably, these registers will be scanner-compatible for the later addition of automation.
- It was reported that many Soviet engineers are working on the development of auto ID hardware. A Soviet spokesman, Mr. Abramov, made it clear that his countrymen did not want to purchase a "western kit." He claims that three models of scanners have already been made from domestic components.
- Some isolated success stories from the East have already emerged, including: blood transfusion bar coding and scanning in Hungary and Yugoslavia, and the bar coding of records and compact discs by the Czechs (who are also seeking to apply scanning technology during the manufacture of these products).

Overall, we came away with the impression that there is solid interest in bar coding and other auto ID technologies in Eastern Europe. Hungary, for example, winds up as a net exporter of auto ID technology based on the success of an OCR software package developed within the country. Joint ventures are slowly building up, although these initiatives are generally based on small teams of 5 to 10 technicians.

It would be dangerous, however, to translate these signs of activity into a market projection based on a comparable stage of development in the West in the mid-1970's. There are many economic and political problems to be resolved before any such forecasts could be justified.

In what may be an educational first....

....the Eyetech Group and Teesside Polytechnic, both in the UK, have agreed to create the Eyetech Professorship in Automatic Identification at the college. The Eyetech Group is involved in the development of the specification and marketing of auto ID systems and has been particularly successful in installing systems with third-party carriers for the tracking and tracing of parcels.

Both Eyetech and Polytechnic see the sponsorship of a Professor in Automatic Identification as a mutually beneficial endeavor. The School of Computing and Mathematics will benefit from up-to-date feedback on the best commercial implementation practices in the auto ID field. The new Professor will be expected to spend time in a non-executive capacity with Eyetech, briefing the Group on the latest academic thinking in the field of computing. As part of

the agreement, Eyetech will provide industry speakers, the latest in auto ID equipment and, ultimately, full-time employment to the students and graduates.

In the US, this summer, the very successful Teachers Institute continues. This is the fine AIM/US tuition-free program that educates college instructors on how to incorporate auto ID technology into their course curriculum. There are currently two such Institutes scheduled for 1990.

Dr. James Fales of Ohio University, who has pioneered the Teachers Institute concept, will lead his fourth summer program from July 15-20, at his school's Athens (OH) campus. A successful spin-off from the Ohio U program, started last summer, is conducted by Dr. Thomas Little at San Jose (CA) State University. This year's session will be held June 17-20.

AIM provides up to \$300 in traveling expenses plus room and board for each attendee. General information on the Teachers Institutes: AIM/US, 1326 Freeport Road, Pittsburgh, PA 15238; 800/338-0206; FAX 412/963-8753.

Since we sometimes get a bit too serious....

...about this business, we'll wind up this month with two of the better attempts at auto ID humor that were published recently in the "lay" press:

In the March, 1990 issue of *Esquire* magazine, Donald R. Katz asks the question: "Are your groceries spying on you?" According to Katz: "Most people manage to pass through the day without ever noticing the preponderance of bar codes that now tattoo much of the physical plane." He describes them as "absurdly omnipresent, aesthetically hopeless little zebra-striped Band-aids full of secret code [that] have been rendered almost subliminal, blending into the landscape with the gentle appropriateness of rivers and trees."

Katz blended his humor with a surprisingly accurate condensed history of how bar coding can trace its history from railroad cars to potato chips, baby formula, books, wine bottles and library cards, and from under the hood of his rented car to his runner's bib in a marathon. He also swore: "They're everywhere, I tell you. Lurking."

Finally, Katz asks and answers the ultimate questions: "So...will we all be tagged in the end? Will future high-tech wands read invisible codes...telling the wielder of our histories, predilections, and preference in oven cleaners? But then the nervousness passes...we fear the face of true order, but we hate disorder. It's a real dilemma."

Knight-Ridder Newspapers' syndicated columnist/humorist Dave Barry rendered his sarcastic comments about scanning near the end of an article titled "Marla and the Technocrats." He posed and then answered a question about how those automatic supermarket check-out scanners work: "Inside the counter," he wrote, "is a small compartment where a person named Marge crouches in the darkness peering up through the window and frantically ringing up your purchases as the clerk waves them past. The system used to involve the laser beam, but they had to stop this when the beam detonated a scan of Spam, sending superheated chunks of meat-like byproducts hurtling in all directions and severely damaging an issue of the weekly *World News* ('Marla: Elvis Ate My Baby'.)"

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