



newsletter

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A few surprises emerged....

...this past month, when we followed up on the status of the Lemelson/Refac patents. Jerome Lemelson is the prolific inventor who assigned his four bar code-related patents to Refac Technology in 1987 (*SCAN* Aug 87, Oct 88). Refac sent out broadside letters to many companies notifying them that they were infringing and inviting them to enter into licensing agreements.

On November 9, 1988, after many delays, Refac filed its first suit (in the U.S. District Court, Southern District of New York) against 16 companies:

Burr-Brown; Eastman Kodak; Federal Express; Harris Corp.; Honeywell; Island Cash Register; Opticon; Pama Enterprises; Pentax Precision Instrument; Sumitomo Electric USA; Tandy Corp.; Telxon Corp.; J. C. Penney; McCrory; Unisys Corp.; United Parcel Service.

Quoting from the "complaint," each company is charged with having "made, used and/or sold code apparatus coming within the scope of U.S. Patent No. 3,735,350 and therefore has infringed said patent." The action goes on to ask the Court for an injunction and for damages.

As we reviewed the patent suit, we were struck by the peculiar choice of companies, so we questioned David Fink, Refac's Group Patent Counsel in charge of this case, about these selections. He replied that he selected companies by geographic region; he chose companies which were doing business as manufacturers, vendors or users of bar code equipment which, in his judgement, were in violation of the patent; and he tried to avoid those firms which were customers of companies with whom Refac had already signed licenses. Using these criteria, Fink did not think (as we did) that this was such a peculiar agglomeration of companies to be lumped together in one legal action. He further revealed that Refac will be filing suit within 2-3 months against a new group that is located in the region covered by the U.S. District Court, Eastern District of New York.

[We are aware of only one official reply to the November, 1988 suit. In a motion that was filed on January 5, 1989, Telxon denies that it has infringed, claims the patent is "invalid, unenforceable and void," and files a counterclaim to have the suit dismissed.]

A second surprise that emerged, as we reviewed the Refac complaint, is that Refac is no longer pursuing its actions on the four patents originally announced two years ago. The lawsuit is now based solely on the so-called



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"350" patent (No. 3,735,350, "Code Scanning Systems" issued May 22, 1973). A second patent (No. 3,918,029, "Scanning System Method") has been voluntarily sent back to the U.S. Patent Office for reexamination. The remaining two patents are not being pursued at this time.

Fink points to the resubmission of the "029" patent as a demonstration of Refac's fairness and willingness to negotiate. Based on objections and documentation by opposing attorneys, he said, Refac felt there were enough legitimate questions about this document to warrant sending it back for review.

Refac's attorney contrasts his "reasonable position of being open to private discussions" to the "public boasting of Tom Wettach who claims that the Lemelson patents can be ignored." Wettach is the Pittsburgh attorney engaged by the Automatic Identification Manufacturers to study the patents and their potential impact on the industry (SCAN Oct 88). According to Fink, Wettach has cited 75 to 100 patents which challenge the validity of the Lemelson patents. But, Fink continues: "There were no details, arguments or analyses by Wettach and we are not about to do his homework for him." Fink claims to have written to Wettach, but he has had no response and they have never met nor spoken.

Our final surprise came when Fink disclosed a list of the 9 licensees who have signed up under the Lemelson patents. There may be others, but Refac will not disclose their names at this time. One of the names recently added to that list was Welch-Allyn. We spoke with Kevin Jost, W-A's VP Industrial Division, who told us that his company had taken out a license on all four of the Lemelson patents. Jost readily confirmed that Welch-Allyn had been one of the participants in the industry study coordinated by AIM and, based on that study and their own investigations, they were "reasonably confident that the patents are not valid and that Welch-Allyn does not infringe."

"In spite of this," Jost continued, "we wanted to get this behind us and avoid any lawsuits. We had to protect our OEM customers, and ultimately we decided to do what is right for our company on a dollars and cents basis."

COMMENT

In July, 1986, Popular Mechanics published an interview of Jerome Lemelson conducted by the best-selling author, Tom Wolfe (The Bonfire of the Vanities). The thrust of the 7-page article was that American inventors do not get a fair shake, because large corporations indiscriminately violate their patents without acknowledging them or paying any royalties. According to Lemelson, these companies know that the inventors are not able to afford the enormous legal fees necessary to pursue all of the violators, and the corporations generally prevail over the inventors by outspending and outlasting them.

Lemelson goes on to describe how he has been fighting this system for almost 40 years. In the current Refac lawsuit, however, judging by the action taken by Welch-Allyn, it would seem that the tables may have turned, at least in some instances. In a February, 1989 interview, published in Automatic ID News, Refac's Fink drives this point home: "After the initial name calling, some parties will decide to get out of this game because litigation is extremely expensive. They realize legal fees will cost them five times more than paying royalties."

In a move to expand....

....the scope of his activities, David Allais has formed a new corporation -- Applied Tactical Systems of Washington, Inc. Allais left Intermec last year to start Allais & Associates, an independent company engaged in bar code related consulting projects (SCAN Nov 88).

ATS/Washington is affiliated with Applied Tactical Systems of New Jersey, founded by Russ McCabe, a longtime associate of Allais. McCabe was President of Spheral Systems, Intermec's East Coast distributor, which was acquired in 1986 as part of Intermec's program to integrate its sales organization. He remained as an employee of Intermec for about a year after that and then left to form ATS/New Jersey in July 1988.

ATS/New Jersey now has 20 employees and boasts of an impressive roster of Fortune 500 clients. The company specializes in large integrated systems (average sale in excess of \$250,000), which rely on proprietary software. The software package is tailored to collect and manipulate data for manufacturing and distribution operations, and includes functions such as shop floor data control, employee management, quality control and inventory control. ATS stresses full system integration -- single source -- and will include the required computers and other hardware in the sale. According to Allais, data input to the systems will involve just about every auto ID technology -- from bar code scanning to voice recognition.

With existing offices in Fairfield, New Jersey and Rochester, NY, ATS gains national coverage with the addition of Allais' new Washington-based organization. Ownership of the two companies is separate -- although there is apparently some joint financial interest by both Allais and McCabe in the New Jersey and Washington corporations. According to McCabe, Allais will shortly be appointed as Chairman of the Board of the New Jersey company, while McCabe remains as CEO. Allais adds that he will continue to operate Allais & Associates in addition to his ATS activities.

Applied Tactical Systems/Washington, Box 806, Lynnwood, WA 98046; 206/775-8963

The outstanding financial results....

....posted by Intermec for fiscal year 1989 demonstrated that the company has sustained -- and even improved -- its turnaround performance of last year.

<u>INTERMEC</u>	<u>3 Months ended 3/31</u>		<u>12 Months ended 3/31</u>	
	<u>1989</u>	<u>1988</u>	<u>1989</u>	<u>1988</u>
Revenues (\$000)	\$40,263	\$27,032	\$131,112	\$93,618
Net Income (\$000)	3,077	1,635	8,036	4,881
Net Income/Share	.43	.24	1.14	.73

Intermec's increase of 40% in annual revenues and 65% in earnings exceeded even their own management forecast of a year ago when they predicted a 25-30% growth (SCAN April 88). The company seems to have hit its stride, over the past 24 months, following an earlier period of management disarray, operating difficulties with some key distributors, and a general perception of corporate tentativeness and insecurity.

A key element in this improved performance was the conversion of the company's marketing organization from independent distributors to an integrated direct marketing staff. According to Chairman/CEO John Paxton: "Intermec reached an important milestone in fiscal 1989 by completing its multi-year acquisition program of its North American distribution network." Intermec's successful completion of this project has certainly been impressive.

[The transition from selling through distributors to a fully integrated direct sales force can be a slow, difficult, costly and often quite painful process. Long-standing distributorship arrangements, which may have helped to build a company, must ultimately be severed in favor of direct company representation. Key sales representatives are sometimes lured away, and some distributors are ultimately forced to go into competition by signing up with other manufacturers. Intermec encountered all of these problems over the past few years, but seems to have emerged reasonably unscathed.]

In discussing last year's results, Paxton also points out that Intermec now has "the broadest range of product and software available in the data collection industry, affording us the unique opportunity to implement a system solution approach within targeted markets."

It is apparent that the stock market strongly approves. Intermec's stock closed at over \$30 in early June -- an increase of more than 50% since the first of the year.

About halfway through....

....its 1989 fiscal year (ended 3/31), Telxon's President Ray Meyo predicted, in an interview with SCAN, that his company's year-end results would reach "\$150 million in profitable sales" (SCAN Nov 88). The actual year-end results turned out to be a mixed bag, possibly reflecting the company's checkered experiences these past 12 months.

<u>TELXON</u>	<u>3 Months ended 3/31</u>		<u>12 Months ended 3/31</u>	
	<u>1989</u>	<u>1988</u>	<u>1989</u>	<u>1988</u>
Revenues (\$000)	\$47,755	\$38,240	\$159,622	\$123,860
Net Income (\$000)	4,337	4,132	15,371	14,012
Net Income/Share	.33	.32	1.17	1.05

The 29% increase in yearly sales (to \$160 million) exceeded management's expectations, but earnings did not keep pace and rose less than 10%. Meyo sees a "continuing strong market, not only for our PTCs, but for the connective software to link them into complete, real-time data sharing systems." He admits, however, that income growth continues to lag behind revenues. In a significant prediction, the CEO states: "We expect this pressure to continue into fiscal 1990, which may result in a year-to-year earnings decline for the first 6 months."

Although this statement didn't seem to please his shareholders (the stock dropped a point or two on the announcement and some financial analysts were less than enthusiastic), Meyo intends to stick with his plans for the future.

"We are now in a transition," he told *SCAN* in May, "converting Telxon from a hardware to a systems company." He feels his company is unique in retail automation, with emphasis on "connectivity between the retailers' point-of-sale and personal computers, and Telxon's portable computers."

All of these changes require long-term investments in system design, with emphasis on research and development for software and RF systems. Telxon has shipped a total of 40,000 RF units -- and Meyo estimates that 30% of the company's current business includes radio frequency capability. He rattled off to us (not for publication) the names of over a dozen new accounts obtained during the past 3 months alone, including major retailers, car rental agencies, route accounting companies, warehousing operators, and a major university library.

Telxon's President is prepared to take the heat as a result of the short-term downturn in earnings. Meyo stated: "We have made profit margin improvement a top priority and are instituting some major procedures to control manufacturing costs." At the same time, he stressed that he will not waiver from his commitment to a longer term outlook on corporate growth and profitability.

Meyo concluded the recent interview by emphatically declaring: "We believe these investments are prudent and necessary to maintain Telxon's leadership, expand our markets and revenues and provide shareholders with a good return on investment over the longer term." He specifically denied that profit margins have declined because of competitive price pressures, or that the failed attempt at the takeover of MSI Data has had any negative effect on operations.

Other interesting -- and positive -- tidbits about Telxon's performance:

- Software revenues -- up almost 50% in the fourth quarter -- represented over 7% of Telxon's total revenue last year.
- Sales of products developed within the past two years accounted for 45% of revenues for the 1989 fiscal year.
- International sales were more than 28% of total revenues in fiscal 1989. Since Telxon's chief competitor, MSI Data, had been known for its strong marketing base outside the US, Meyo pointed with particular pride to Telxon's \$44 million in foreign sales, which, he believes now exceeds MSI's total of \$40 million in that category.

The important draft....

....of the Bar Code Print Quality Guideline has been released by the X3A1 Task Force of the American National Standards Institute (ANSI) for public review and comment. The Guideline, in work for over 3 years, has gone through some very significant changes in concept and specifics (*SCAN* Oct 86, Aug 87).

[The committee charged with developing this document was a fusion of MH10.8 (which developed the first ANSI standard on bar coding of transport cases) and X3A1.3 (the long-standing OCR group). The "Secretariat," which is the responsible agency charged by ANSI with overseeing these committees, is the Computer and Business Equipment Manufacturers Association (CBEMA).]

The latest draft of the long-awaited Bar Code Print Quality Guideline is a product of the last two meetings -- July 13 in Chicago and September 14-16 in Myrtle Beach, SC -- during which the Task Force worked strenuously to resolve the final differences among its 13 active members. A mail ballot, conducted between the two meetings, had resulted in some comments and objections which were almost all resolved in Myrtle Beach. The final tally was 12 affirmative and 1 negative.

Printronix, which cast the lone negative vote, proposed a replacement for the "quality grading" system that was incorporated into the new guidelines. The proposed system, and the detailed changes put forth by Printronix, are much too long and complex to describe here.

Suffice to say, the committee's minutes and member reports reflect the heat and emotion that can be generated by these "cool" engineers and scientists. For example, quoting from the minutes of the Chicago meeting: "Many short and long, simple and complex, soft and loud, agreeable and disagreeable discussions occurred." Even the committee's position paper, evaluating Printronix' proposed change, laments the use of such terms in the Printronix comment as "untenable document," "ludicrous," and "Alice in Wonderland."

The net result was that everyone calmed down long enough to agree to forward the draft for review by the X3 Committee, which was the next step up the ladder in the normal evolution of an ANSI standard. X3, in turn, now has it out for public review. Meanwhile, separate studies are continuing in an effort to resolve the negative vote.

Director, X3 Secretariat, CBEMA, 311 First St., NW, Washington, D.C. 20001; 202/737-8888. Copies of the draft standard may be obtained directly from Global Engineering Documents, Inc., 714/261-1455 or 800/854-7179.

COMMENT

We have informally discussed this proposed standard with many people in the industry -- who are not members of the ANSI committee -- who have expressed strong reservations. X3A1's new approach to print quality evaluation includes multiple scans (at least 10 readings spaced evenly up and down the symbol) and a grading system (from A to F) that some find confusing and overly complicated.

If you have any comments or suggestions, register them now rather than complain about them later.

The explosive growth....

....of UPC/EAN retail scanning may be most apparent in the major economic centers (US, Japan, UK, Germany and France), but events are taking place in other nations which offer a "global snapshot" that helps place our perspective in even sharper focus.

From the 1988 year-end report of member activities, issued by the Brussels-based International Article Numbering Association EAN, we noted some special details. For example:

- In addition to the US and Canada (with over 75,000 manufacturers signed up), there are 42 EAN member countries, who have more than 100,000 member companies.
- The EAN symbol is now appearing, or will soon be placed, on books and recorded music in Czechoslovakia; jewelry in Italy; car shop products in the Netherlands; agricultural products and liquor bottles in New Zealand; pharmaceuticals in Spain and Brazil; health insurance documents in Switzerland; books in the USSR; cents-off coupons in Belgium.
- In some countries -- notably the UK -- scanning in non-food stores has outstripped supermarkets.
- Using EAN coding as a foundation, many countries are moving into the use of electronic data interchange between trading partners.

[The only EAN member that had not reported in with a year-end synopsis of activities was Papua New Guinea -- maybe next year.]

Summarizing the 1988 performance, EAN reported a 1988 year-end total of 18,000 scanning store installations -- a 30% increase in just 6 months.

[This count does not include Japan, where the reported figures indicate an "estimated" 60,000 scanning retailers at the end of 1988. Since Japan's EAN organization reported 21,000 such stores only 9 months earlier, we felt that these figures need further substantiation, and we have set them aside for now for purposes of this evaluation.]

In August, 1986, we published a unique analysis of what we felt was the "real penetration" of retail scanning throughout the world. This survey was based on the number of scanning stores and checkouts per million of population in each country. We have updated these figures for a selected group of countries, as of the end of 1988, and have come up with some surprising results. (Japan -- which would certainly rank near the top of the list -- was not included for the reasons cited above.)

<u>COUNTRY</u>	<u>SCANNING STORES</u>		<u>SCANNING CHECKOUTS</u>		
	<u>Total Number</u>	<u>Per Million Population</u>	<u>Average Per Store</u>	<u>Total Number</u>	<u>Per Million Population</u>
United States *	20,000	80.0	8.0	160,000	640
France	3,741	62.4	8.0	27,768	499
United Kingdom	2,792	49.2	6.0	16,752	295
Germany	2,252	36.9	6.3	14,188	233
Australia	1,098	66.5	8.8	9,662	586
Norway	998	237.6	3.4	3,393	808
Finland	838	171.0	4.7	3,939	804

(*The number of stores and checkouts in the US are included as a point of reference. They are *SCAN Newsletter* estimates, and reflect supermarket installations only. For all other countries, the basic data, as reported by EAN, is for the total number of food and non-food stores.)

Based on market penetration, Norway and Finland have far outstripped the rest of the world -- and if extrapolated, these results strongly suggest that the retail scanning market is still far from mature, even in North America.

When he retired, about six years ago....

....Bert Best, founder and owner of Kings Town Photocodes (Beverley, England) sold equal interests in his company to his proteges, Harry Clark and Chris Swindin. The new owners continued to expand the company's role as a major player in the UK's bar code industry. KTP manufactures film masters, and distributes RJS printers and verifiers and Metrologic scanners (SCAN Aug 86).

Recently, rumors have been circulating about major management changes at KTP. SCAN has been reliably informed that negotiations are currently underway for Chris Swindin -- who functions as Marketing Director -- to leave the company. A final separation is expected within a few weeks. In the meantime, Swindin will continue as Chairman of AIM-UK and will take a prominent part in the forthcoming SCAN-TECH-UK 89 conference.

Attendance on the exhibit floor....

....was not up to expectations, but there was a strong showing at the educational seminars at ID Expo (May 9-11 in Los Angeles). Some exhibitors we interviewed felt that the "quality" of the visitors was good, which made up somewhat for the lower number of bodies. (Visitor registration, as compiled by the show management, totalled 3,380 -- down a bit from last year in Boston. Maybe it was the larger space in LA that gave some vendors the impression that there were considerably fewer people than last year.)

[Of course, the assessment of a trade show depends on who is doing the evaluation. Marketing personnel always want to be where their customers (and competitors) are -- and they certainly find it easier to gather new prospects this way, compared with sales calls or telemarketing. Management, on the other hand, wants to know how many sales conversions were made per exhibit dollar spent. This is becoming a major problem in an industry where even some of the smaller companies are finding that they are exhibiting in more than 25 national and regional shows each year.]

There may have been a few factors which affected attendance at ID Expo: Downtown Los Angeles (not a very high-class neighborhood) turned out to be a less-than-attractive venue; the West Coast has had more than its share of auto ID shows these past few years; and the upcoming SCAN-TECH 89 is only five months and a few hundred miles away (October in San Jose). All of these considerations may have been too much for some travel budgets.

No one seems to place any long-term significance on the flat attendance. Although we know of two companies that have cut back on next year's booth space, three-quarters of this year's exhibitors have already signed up for ID Expo 90 -- and Chicago is expected to be a better draw than downtown LA.

As for the show itself, the exhibitors did not feature too much that would be considered innovative. There was a good representation of all auto ID technologies, but old hands in the industry did not find anything new to take home.

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