<u>We</u> <u>are</u> <u>very</u> <u>pleased</u>....

....to report that <u>Metrologic</u> has emerged from their Chapter 11 bankruptcy (SCAN Sep 85, Nov 85, Feb 86) in what everyone believes to be record time (even the judge hearing the case commented on the speed). It is a very positive sign to be able to reorganize, settle affairs with bankers and creditors, and get back on your feet after only six months -- we've seen most bankruptcy reorganizations drag on for years. President Harry Knowles gives credit for this positive outcome to the bank which restructured the $2.6 million debt to manageable terms. Unsecured creditors will be paid 10%.

The really important point is that the company management was forced to re-examine its corporate structure, product line, internal financial controls, and sales and marketing strategies. Knowles states it in the most positive terms: "Since operations were reopened in August, 1985 after filing Chapter 11, we reduced staffing levels 30%, we began to ship on schedule in virtually all accounts, our bookings have remained strong and we have kept almost all our customer base. Accordingly we have been strongly profitable with excellent cash flow. Metrologic is financially stronger than ever in our 18 year history. We are ready for the challenges that are ahead."

<u>Bill</u> <u>Hakanson</u> <u>wants</u> <u>to</u> <u>be</u> <u>sure</u>....

....that everyone knows that <u>SCAN-TWO</u> (SCAN Feb 86) will be held at the ExpoCenter, which is <u>downtown</u> Chicago in the Apparel Mart Building across from the Merchandise Mart. The seminars and exhibits will be held in the same building which also houses the Holiday Inn on the upper floors. Hakanson, Executive Director of AIM, emphasizes the convenience of this location.

The show will focus on the "how to" applications for those who are already familiar with bar coding and other automatic ID technologies. The seminars will feature 14 industry experts and will be geared to the automotive, retail distribution, electronic manufacturing, health care, paper and aerospace industry. Most of the speakers will be from user companies with solid hands-on experience.

SCAN-TWO is a two-day event scheduled for April 16-17, 1986. By the end of February about 75% of the exhibit space was taken and by the time you read this, you may have to rush to get space.

AIM, 1326 Freeport Road, Pittsburgh, PA 15238; 412/963-8588.

Although __its__ __circulation__....

....has grown to a respectable 2,600, and its content has been improving with
each issue, ScanJournal has suspended publication for six months. The purpose
is to reevaluate the direction of this technical journal with regard to
editorial content, advertising and sales promotion.

The plan is to call in an outside professional to help. In the meanwhile, all
paid subscriptions will be held open and the unused balance applied against
later issues when publication is resumed. We hope it is soon.

COMMENT

We have actively supported -- both on these pages and privately -- the
publication of a technical journal for this industry. It provides a
forum for the more technical engineering papers, and is a required medium
for any technology seeking to achieve a certain stature. Admittedly,
ScanJournal has been spotty and we have wondered aloud how some material
has gotten past the editorial board. Apparently the AIM Board of Directors
shares some of these misgivings.

Those __of__ __us__....

....in the information business -- publishing a newsletter or magazine, or
consulting -- are constantly being called on to supply industry statistics; e.g.
How large is the bar code scanning industry? What will be the rate of growth
over the next five years? Ten years? What new products are needed, and which
have the largest growth potential? Which companies will be successful?

Unfortunately, most of the time the answer is, "We don't know" or "There is no
reliable data available." It is a subject often talked about in the corridors
at industry meetings, but so far no one has done anything serious to fill the
void.

North American Technology -- publishers of Bar Code News -- have now
undertaken a market study to provide some limited data which they expect will be
valuable for strategic planning by companies in the bar code area. They have
sent out 5,000 questionnaires to recent subscribers of their magazine who are
end-users. They expect to receive about 1,000-1,200 replies (860 are already
in), and plan to tabulate the answers and publish the results before the
Automatic ID Expo on May 19 in San Francisco. Auto ID Expo, a show sponsored by
the same North American Technologies organization, will cover all areas of
automatic identification (SCAN Feb 86).

According to the sponsors, the study--Bar Code Market Trends Survey -- will
highlight product and service areas which are ripe for development, and
determine the problems with the industry from the perspective of the end-user.
The 18 part questionnaire is very extensive, asking definitive questions about
current or planned systems and opinions as to equipment and system performance.

To get a copy of the results (expected to be a 300-page report), send $450 to
Bar Code News. Buyers of the study will be entitled to attend a seminar at ID
Expo explaining the results and how to use the statistics. Exhibitors at ID
Expo will receive a free copy of the report and also free entry to the seminar.

Bar Code News, 174 Concord Street, Peterboro, NH 03458; 603/924-7136.

<u>A new study</u>....

....has been issued by <u>International Resource Development</u> (<u>IRD</u>):
<u>Identification and Verification Systems</u>.

As used by IRD, the terms identification and verification are catch-all
descriptions covering such varied technologies and product types as: physical
security (access control, theft protection, property and personnel protection);
transaction security (point-of-sale and automatic-teller-machine transactions);
product distribution security (counterfeiting, theft); information management
(collecting, organizing and tracking information).

It is in the last grouping -- information management -- that bar codes appear.
The report does not devote too much space to bar coding itself, but some of the
other identification and verification areas, which might some day compete, are
explored in depth.

This report forecasts bar coding equipment and services sales at $230 million in
1985, increasing to $1.77 billion in 1991. A previous study, <u>Bar Code Systems
and Equipment</u>, published in late 1984 (SCAN Dec 84) reported 1984 sales were
$562 million; in that same report, sales for 1986 were projected to be $1.2
billion and 1994 $1.5 billion. As always, industry forecasting is a risky
business.

Although not a commercial threat to bar coding in the foreseeable future, a
particularly fascinating area covered by the study is the field of Biometrics as
it relates to access control. Biometric devices create and store a digital image
of a person's unique physical qualities, and then compare the stored to the
human (real-time) versions. Some of these include: hand geometry, fingerprint
identification, retinal scanning, signature verification, voice identification,
and palm pattern identification. The study estimates 1985 sales revenue of
biometric devices at $3 million, climbing to $245 million by 1995.

The IRD studies cost $1,850. IRD, 6 Prowitt Street, Norwalk, CT 06855;
203/866-7800.

<u>One of the automatic identification</u>....

....technologies, which some say looms over the horizon, is the scanning and
automatic identification of fingerprints (see IRD study above). It sort of
makes sense if you can visualize a fingerprint as a set of parallel lines in a
particular configuration (algorithm?).

It may be coming, but the US Federal Bureau of Investigation can't wait.
Recently, Marking and Tracking Systems, Inc. (MTS) installed a bar code
fingerprint tracking system for the FBI.

The FBI system consists of ten portable bar code scanning terminals, prog-
rammed to keep track of information file jackets in all of the division
locations. The file jackets have been imprinted with bar codes with the file
numbers encoded. MTS believes the system is adaptable to other location
problems such as random storage in warehouses.

MTS, 15962 Shady Grove Road, Gaithersburg, MD 20877; 301/921-4223.

<u>We decided it was time....</u>

....to follow up on the <u>UPC patent infringement</u> suit filed by Mr. Bilgutay (SCAN Sep 85). We spoke with the attorney retained by the Uniform Code Council and learned the following:

- The court has agreed to make the UCC the only defendant and to drop the action which had been started against half the civilized world; i.e. UPC users, equipment makers, film master producers, et al.

- The attorneys are seeking a "summary judgment" to have the case dismissed, claiming "latches and estoppel." (Try those buzzwords at your next cocktail party.) In English, it means that Mr. Bilgutay waited 11 years before bringing action, and the technology has grown too large with too many people involved to stop it now.

- Whether or not the summary judgment is rendered in favor of the UCC, the basic reply to the suit is still that it is totally without merit because the patent is invalid and because UCC does not infringe, even if it were.

- The case is scheduled to be heard sometime this summer.

No one seems particularly concerned about the outcome, but every legal precaution is being taken to be sure the verdict is favorable to the industry.

<u>As they say on the....</u>

....quiz shows: "I think we have a winner!"

We have been reporting off and on over the years about the importance of establishing a workable <u>coding</u> system before any serious consideration is given to the automatic identification <u>symbol</u>. And we have also noted, with some alarm, the length and complexity of some of these codes. We are still uneasy, for example, about the Health Provider Code and Symbol which can run to 35 characters or more in its various formats.

But we are now ready for the Guinness Book of Records with what has to be the ultimate: A 49 character code -- which includes alpha/numerics, punctuation and special symbols -- has been recommended by <u>SISAC</u>. This is the <u>Serials Industry Systems Advisory Committee</u> (not to be confused with BISAC, which is the Book Industry ... etc.). Serials are defined as "publications in print or non-print form issued in successive parts, at regular or irregular intervals, bearing numerical and/or chronological designations and intended to be continued indefinitely." Serials include periodicals, newspapers, annual works, reports, journals and so forth. The code will identify the publication's serial number (ISSN), date, volume and issue number, and can continue down to identifying each article with page number and title.

The requirement for an alpha/numeric bar code symbol narrowed the choices to codes 39, 93 or 128, according to the committee report. The need for the most condensed machine readable symbol won out for code 128 with its optional shorter numerics-only version. (It had better be condensed or it will run off the printed page.)

SISAC has put in a great deal of work since its first meeting in 1982. The proposed system involves the broad range of identification, computer-to-computer ordering, automation of library check-in and circulation and extensive field testing. For the time being, the mass circulation publications, which are using the UPC + 2-digit supplemental code, will not be affected. The committee decided to set these publications aside and concentrate on the vast number of non-mass circulation publications.

SISAC operates under the Book Industry's Study Group (BISG) umbrella. We suspect the committee's work may not be over. This proposed specification is at odds with plans by some leading Euorpean authorities. They are proposing the use of the EAN symbol in a manner similar to the Bookland/EAN system (SCAN Feb 86). In all fairness, the printing and scanning problems inherent in a 40+ string of bar coded characters should not be dismissed. SISAC, 160 Fifth Avenue, New York, NY 10010.

Now that FACT,....

....the Federation of Automatic Coding Technologies (SCAN May 85, July 85, Nov 85) is up and running with four active operating committees, things are beginning to happen.

The two most active committees are Membership and Technology. The Technology Committee is co-chaired by Connie Robinson (Aluminum Association) and Bob Baird (NEMA) and has undertaken to look over the shoulders of a number of industry groups working on various specifications, standards and special projects. These include AIM's Uniform Symbol Specification, and AIM's Symbol Testing Program. The committee is currently engaged in further defining its objectives and responsibilities.

The Membership Committee has sent out invitations to 150 trade and professional groups and associations, and to 150 unaffiliated companies to join FACT. These 300 organizations have expressed interest, at one time or another, in membership. The invitations are to attend a meeting to be held on April 15, the day before SCAN-TWO in Chicago. The purpose will be to describe FACT's charter and plans and to sign up as many new members as possible.

AIM is still providing administrative support for FACT, so contact Bill Hakanson, FACT, 1326 Freeport Road, Pittsburgh, PA 15238; 412/963-8588.

Some people can't wait....

....for technology to catch up with their needs, and they just move ahead on their own. This seems to be the case with Ream's Superstore in American Fork, Utah. A recent story in Supermarket News describes how this store developed and implemented the concept of allowing customers to check out their own orders. The system goes even further by reducing prices at those self-service checkstands where the customers scan and bag their purchases.

The key to monitoring the self-service transactions is based on the weight of each product and the gross weight of the total purchase. It works like this: each product in the store has had its weight entered in the computer's item data file; as the items are scanned, the price and weight are recorded; each customer's total purchases are pre-weighed in the cart; as each item is

scanned, it is placed in a second cart, which is sitting on a scale and accumulating the weight of the purchases as the scanning proceeds; the accumulated weight and the scanned weight are matched as the checkout proceeds. The procedure is monitored by a cashier who is watching the four self-service checkstands -- with the help of overhead TV cameras.

The system works so well that the store plans to install four more self-service lanes and to franchise the system to others at under $100,000 per store. It was all designed in-house using Spectra Physics scaners and IBM PC-XT computers to handle the price look-ups, inventory management, weight tabulation and other functions.

Surprisingly the customers catch on very quickly. In addition to the 3-4% saving benefit from lower prices, they seem to enjoy the process and can monitor the prices as they go across the scanners. Store managers have found that after a little practice, the customers are just as fast as the experienced checkers. Great idea!

Although we haven't been keeping track....

....an interesting new statistic is emerging in UPC/EAN retail scanning: Which retail store has the largest number of checkout scanners? According to the South African trade publication Supermarket and Retailer the first and second places go to the Pick 'n Pay chain with stores in South Africa and Australia. Number one is their hypermarket in Brisbane, Australia with 75 scanners. Second place goes to the chain's Wonderpark unit in Akasia, Pretoria, South Africa, with 64 scanning lanes. In the Wonderpark store, there are 30,000 products on the shelves, and 92% are being scanned. Since many items are not source-marked, they have to be bar coded in-store.

But like most records, these are also targeted to be surpassed. Selfridges, the London department store, already has 40 scanning terminals, and later this year plans to expand that up to 400 terminals. This project will cost £2.5 million ($3.55 million) and requires 6 IBM in-store computers and 900 terminal sites to record 350,000 different products and 20 million transactions a year. More details of this massive installation will be available soon.

We haven't yet set any special ground rules (slot scanners versus hand-held, centralized checkout lanes vs. departmental cashiers, etc.), but is there anyone out there with a legitimate challenge to these numbers?

Talking about EAN scanning stores, by the way, France is now the second EAN affiliate country to break through the 1,000 store barrier. Japan was the first in 1983. Gencod, the French EAN affiliate, reported in December 1985 that there are 1,010 retail installations in France. Of these, 106 are non-food stores. We have compiled additionl data, from a number of sources, for some other EAN countries: United Kingdom-502 (Dec 85); Belgium-204 (Nov 85); New Zealand-83 (Dec 85); Spain-82 (Oct 85); South Africa-37 (Dec 85).

Bar code symbol verification

....is becoming more important as print quality is stressed to improve system performance. We know of three companies offering verification products: Photographic Sciences, RJS Enterprises and Symbol Technologies. Devices range

in cost from under $1,000 for relatively simple go/no-go devices to $10,000 or more for the more sophisticated units which provide complete and detailed printed analyses.

Although most devices now in use were purchased to test UPC symbols, the growing use of code 39 and interleaved 2/5 symbols has expanded the market. The federal government's requirement for Certificates of Conformance for LOGMARS bar codes has also increased demand.

The newest verifier is Photographic Sciences' Quick Check III portable unit. It determines print quality, confirms wide/narrow ratios, indicates print contrast/reflectance measurement, decodes, and verifies character formats according to application specifications. The Quick Check III will check UPC/EAN with or without addendums, AIAG, LOGMARS, SCS, HIBC, code 39 and interleaved 2/5. The unit is priced at under $2,000 plus $400 for the printer attachment.

Photographic Sciences, Box 338, Webster, NY 14580; 800/828-6489; (from New York 800/828-3030).

Intermec has introduced....

....a new Multi-Drop Concentrator designed to simplify and reduce costs of managing bar code data collection systems. The unit handles bi-directional data traffic between the host computer and up to 140 Intermec bar code readers and printers.

The concentrator features 64K RAM with 20K data buffer. List price is $3,950. Intermec, Box 360602, Lynnwood, WA 98046-9702; 206/348-2600.

Some of the details....

....have emerged about the non-exclusive license granted to Spectra Physics by Symbol Technologies under its hand-held laser scanner patent (SCAN Dec 85/Jan 86). Spectra paid $200,000 in damages. In addition, the company will pay a royalty on sales of these devices: starting at 7 1/2% the first year and decreasing by 1/2% each year, it will level at 3% in the tenth year and beyond for the life of the patent. Not bad!

For the first and second quarters of its fiscal year, Symbol Tech reported substantial gains in sales and earnings:

SYMBOL TECHNOLOGIES	3 Months Ended 12/31		6 Months Ended 12/31	
	1985	1984	1985	1984
Revenues ($000)	$5,216	$3,254	$9,587	$6,168
Net Income ($000)	365	75	586	113
Net Income/Share	.07	.02	.12	.03

There is improvement....

....in the quarterly earning performance of MSI Data as it proceeds with its plans to reposition the company. President Charles Strauch states that

orders and shipments have risen steadily over the past six months.

MSI DATA	3 Months Ended 12/28		9 Months Ended 12/28	
	1985	1984	1985	1984
Revenues ($000)	$15,408	$13,154	$46,054	$41,409
Net Income (Loss)($000)	209	323	(116)	652
Net Income (Loss)/Share	.08	.13	(.05)	.26

Following its weak performance....

....in fiscal year 1985 (SCAN Sep 85), Graphic Technology's financials for the
first six months of 1986 are still erratic. The 37% increase in sales was not
matched by earnings which are down from last year.

The company attributes that to lower gross margins and reduced interest income
compared to last year. President Terry Van Der Tuuk states he is encouraged,
nevertheless, by the improvement in gross margins compared to the poor last
quarter of fiscal year 1985.

GRAPHICS TECHNOLOGY	3 Months Ended 12/31		6 Months Ended 12/31	
	1985	1984	1985	1984
Revenues ($000)	$4,376	$3,379	$9,195	$6,698
Net Income ($000)	284	336	657	709
Net Income/Share	.15	.18	.35	.37

GTI, a custom designer and manufacturer of vinyl bar coded shelf labels, lost
its case in a hassle with the Federal Government over a $4 million laser label
contract. Although they were low bidder, their bid was rejected (the reason has
not been reported). The company does not plan to pursue this any further.

Continuing its education program....

....on bar code scanning, the Health Industry Bar Code Council (HIBCC) has
scheduled three regional conferences and exhibitions in 1986: ● March 3-5 in
Dallas ● April 14-16 in Chicago ● June 2-4 in Baltimore.

Vendors are invited to participate and exhibit their hardware, software and
supplies. In addition, special facilities will be made available for one-on-one
"curbside consultations" by industry consultants, with appointments made at the
conference.

The HIBCC expects a more sophisticated buying audience than in their 1985
conferences and has tailored the programs accordingly. HIBCC, 111 East Wacker
Drive, Chicago, IL 60601; 321/644-6610.