

ISRAEL HIGH-TECH & INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES

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From the Editor's Desk

AN UGLY DUCKLING NO MORE

Getting ahead and staying ahead. The headlong pursuit of these two goals has seen all the "First-World" nations fall behind. Today's recessionary global economy is proof of the interdependence of the world's nations, and the madness of believing that one country's loss can be another's gain. As business conditions weakened in one country, a domino effect brought down the others. First Russia collapsed while trying to "keep up" with the American military/industrial complex. But the US, itself sustained only by the illusion of progress as it spent its trillions speeding along the Cold-War treadmill, has also sunk into recession. Remember the old adage about a sneeze in Washington? Great Britain followed, and then it was Japan's turn. Now even the mighty German industrial falcon is in a tailspin.

Simply put, the industrial nations are struggling for air in the vacuum created by the sudden loss of an international "Bad Guy" against which to arm, national economies based on that arms industry, and markets based on those national economies. Falling stock prices, massive bank failures, rising native unemployment and the resurgence of xenophobia (the search for a local "bad guy" in the absence of a Big One) are all natural consequences. Yes, some are pointing to signs of recovery — *The Economist* in its "World for 1993" issue suggests that the gloom may lift in 1993 — but we shouldn't hold our breath.

Although the economy in tiny Israel has always been far more delicate than those in other industrialized countries, we have avoided sinking into recession. In fact, the "ugly duckling" that has until now had to spend most of its energy trying to simply survive — to avoid being thrown out of its nest into the sea — is beginning to show its true, brilliant, colors. Our GDP, at \$17 billion, was up by a robust 6% last year, and projections are for a 7% gain in 1993. The country's excellent credit rating has been recognized, and the resultant American loan guarantees have

further enhanced our borrowing power. And best of all, the Arab boycott which has kept our economy earthbound is beginning to crack. If the age-old dream of a canal from the Red Sea to the Dead Sea is realized, we may even begin working with one of our old enemies.

But there are always dangers. The people who decide such matters in Jerusalem may be tempted to reduce our immigrant-induced 11% unemployment rate by borrowing even more, and then spending it on infrastructure. This always works in the short run, and goodness knows we need more and better roads, school buildings, hospitals and telecommunications. But in the final analysis, reducing unemployment with "make-work" programs that rely on borrowed money is senseless; the rising debt will have to be paid one day.

Barring such foolish abuses of our national economic health, it seems that Israel will soon be flying. One indicator is its stock exchanges, which continue to advance by leaps and bounds as money is attracted by previous successes. And now the door has been opened to foreign capital looking for a home (see "A Speculator's Guide to Financial Issues").

Another test of the vibrancy of the country's economy is the extent to which it will be able to increase exports in 1993. "United Europe" is beginning to look more like a flock of sick chickens than a gathering of mighty nations, though a number of companies have established footholds there, and

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the Bank of Israel's recent 3% readjustment of the shekel rate of exchange means corporate Israel will remain competitive... with what competition remains. But it's in the nearly-empty skies of the Third World that we will truly begin to soar. More on this later in this issue.

Strategic High-Tech Partnerships Awarded \$7 million

American Partners	Israeli Partners
Ungerman-Bass	DCL
Spectragraphics	Applicom
Isocor	John Bryce
Brooktree	Phasecom
WaferScale	Integration WSI
Integrated Device Tec.	Galileo Tech.
Fairchild Data	Misat
Triplet	Elista
Xenon Vision ART	Pharmos
Agar Corp.	Galram
MetalSoft	MetalSoft
Applied Materials	Applied Materials Ltd.

The Board of Governors of the BIRD Foundation, at its annual meeting in Jerusalem, approved a total of 13 R & D projects representing a commitment of \$7 million as its 50% share.

The activities of BIRD represent the most meaningful American-Israeli area of cooperation in furthering non-military research and development.

Outgoing Executive Director Dr. Ed Mlavsky, who has headed BIRD for the past 13 years, said "the most important lesson we learned is that first-class US companies must be sought out and persuaded to consider Israel as the place to find strategic partners, but once we get their attention, they're hooked."

Investors in Bidding Frenzy

The raging bull market in Israel, now in its second year, is not slowing down. The popular share market index has advanced by more than 50% in dollar terms as the calendar year comes to an end.

The favorable atmosphere is allowing new as well as established companies to raise substantial sums. Most issues are vastly oversubscribed, regardless of the quality of the paper or business record of the company. Many of the securities being sold -- not always to a sophisticated public -- trade immediately at more than their issue price. In some quarters, this should be seen as a warning signal. On the positive side, it should be noted that the banking system, the brokerage houses and the Tel Aviv Stock Exchange are now capable of handling issues of a size undreamt of only a few years ago.

Early in December, an NIS 500 million issue (\$190 million) was offered by the Industrial Development Bank. The issue consisted of securities packaged as shares and options. That part of the issue that was offered to the public was oversubscribed 150 times, representing bids totaling NIS 60 billion!

The banking community obliged, and allowed investors to order on margin. Even conservative institutional and private investors entered the bidding game, since the IDB holding package was viewed as reasonably priced, and could be retained in portfolios over the long term.

In the after-market, buying demand lifted prices over and above even the original 8% gross gain accorded to the issue on the first day of trading.

The First International Bank of Israel is now in the process of bringing to the exchange an issue valued at approximately NIS250 million. It is expected that this offering, by the youngest and smallest of Israel's five main banking groups, will be met by equally strong demand. Institutional investors have already registered indications for NIS 10 billion.

Will the government be nimble enough to take advantage of these market conditions, and keep its promise to accelerate its already-belated program of privatization?

Want to sign up?

At the Ministry of Finance's Investment Authority in Jerusalem, visitors are helped by Seymour Gable, a former American. If you need information about any aspect of investment and regulations, or wish to establish contact with Israeli companies, contact him at 972-2-705-301, or Fax 972-2-513-207.

Towards an Over-the-Counter Market in Jerusalem

The possibility of creating an over-the counter market in Jerusalem will be brought up at the annual conference of the Israel High Tech Industries Association in Tel Aviv on January 6. Keynote speakers will be Prime Minister Yitzhak Rabin, Finance Minister Avraham Shohat, and Industry and Trade Minister Micha Harish.

Moshe Cohen, president of the IHTIA and treasurer of the Labor Party, has already met with Finance Minister Shohat and renewed a request to set up a second exchange. At that meeting, but not reported in the Israeli press, were Prof. Haim Aviv, founder of BTG and Pharmos; Haim Nissenson, president of Rada Industries; and lawyer David Efrati. None of those attending were novices in raising capital, and their presence reflected the recognized importance of satisfying the needs of R & D-oriented,

science-based firms.

According to Cohen, the need for such an exchange is especially acute among high-tech companies, which tend to invest all their capital in R & D and are thus unable to meet the shareholders' equity requirements of the Tel Aviv exchange, recently upped to \$2 million.

A study carried out by the IHTIA indicates that the majority of respondents are seeking to raise capital by public financing. Some companies with annual sales of more than \$1 million are seeking equivalent or larger sums to finance growth. However, there were many respondents which are seeking \$1 million or more with annual sales of considerably less. These firms are the ones particularly interested in seeing the creation of the mooted Jerusalem market.

A Speculator's Guide to Financial Issues

The following description is not intended to recommend any one course of action, but is offered to provide an insight into the behavior of the crowd. Any private individual, corporation or institution which signs an indication of \$150,000 or more is classified as an institutional investor, and thus gets preferential treatment. Some issuers stipulate that institutional investors be granted anywhere from 15% to 60% of their orders, depending on demand.

To enter an indication costs nothing. Funds bid must be officially submitted to the issuer for allocation for only 24 hours after the issue is closed. Speculators are thus likely to borrow money from a bank for this 24-hour period, with the hope of acquiring securities which could appreciate immediately after the issue comes to market. Individual investors who recently bid for the new IDB issue, signing orders for NIS 1.4 million worth of securities, discovered that they had received only NIS 10,000 worth of IDB shares and options. To their great delight, however, both shares and options appreciated considerably after being registered for trading on the Tel Aviv Stock Exchange. And even these speculators felt they were acting in a conservative manner, since even institutional investors subscribed to the issue many times over. Speculators also knew that the banking community was prepared to supply large overnight loans at rates which would not detract from the anticipated quick rise in value after the securities came to the exchange.

Was everybody a winner? So far - YES! The speculators saw a quick rise in the value of their holdings. The banks increased their profits from the interest earned on new issue loans. And stock exchange turnovers soared, with a concomitant rise in income for the TASE.

InterPharm Sets Nine-Month Records

	1992	1991
Sales	\$ 36.3 mil	\$ 25.2 mil
Net income	\$ 4.7 mil	\$ 3.5 mil

(Nine months ending September 30, 1992)

InterPharm, Israel's premier biotechnology company, is enjoying strong growth in sales and profits, which management attributes to an expansion in shipments of Frone, its key product - the human fibroblast interferon. An expansion program, including the erection of a new production facility, should begin as early as 1994, and will add significantly to overall activity.

In executive position changes, Dr. Yoram Karmon will relinquish his post as Managing Director while maintaining his position as acting Chairman of the Board. Alex Kotzer, formerly of Ossem Foods, where he served as V-P of R & D, will assume the post of General Manager as of January 1993.

IIS Expects to Triple Sales

IIS - Intelligent Information Systems, based in Yokneam - has signed an agreement in principle to acquire American Decision Data Incorporated for approximately \$19 million. If the sale is concluded, IIS management expects it will bring another \$100 million in annual sales. (For the nine months ending September 30, IIS had sales of \$32.4 million.)

The acquisition is viewed as a strategic one, since Decision Data has been a major competitor of the Israeli firm, and claims to be the world's largest supplier, outside of IBM, of peripheral equipment, support and service for various IBM systems.

Healthcare Technologies Unveils New Dynamics

Those interested in buying shares of Israeli-related pharmaceutical biotechnology and diagnostic kit companies can consider such names as Teva Pharmaceuticals, InterPharm, BioTechnology General, Pharmos Corp. and Healthcare Technologies. Teva has recently generated the most interest, as it positions itself for the European market through acquisitions and the opening of a new marketing office in Amsterdam. Over the past year, Healthcare Technologies - a small company with a number of clever diagnostic products - has received extensive coverage in this report, yet had not caught the attention of the broader investment community. This changed early in December, when large blocks

of shares changed hands and buyers bid up the price to above \$2 from levels of about \$1.50. Healthcare is now in the pink, with not only growing sales but also profits. In the second quarter of 1992 it reported a small loss, but showed profits in the third quarter – profits which are expected to improve into the foreseeable future. Moreover, Healthcare has signed a letter of intent to acquire Immunotech a Massachusetts-based company for \$2.5 million. Immunotech has its own marketing personnel which currently is accounting for \$2.25 million in sales. Immunotech is a producer of diagnostic kits with its own R&D program. The acquisition could accelerate Healthcare Technologies' penetration of the US market and South America. In another year, Healthcare could be enjoying \$10-\$12 million in annual sales.

Brokerage Report out on Pharmos

Oscar Gruss & Son has prepared an analytical report on Pharmos Corp. The one time privately held pharmaceutical company founded in Israel has recently completed a merger with the US based Pharmatec and has become a public entity with shares traded on NASDAQ. The in-depth report is available at the broker's Tel-Aviv and NYC offices.

Leadership in Telecommunications

ECI Telecom has received an order from Deutsche Bundespost Telekom for approximately \$22 million of Synchronous Digital Hierarchy multiplexer systems. The SDH transmission standard and its American equivalent, Sonet, will form the basis of telecommunications network architecture in the future, and will allow for the flexible use and management of fiberoptic networks.

ECI Telecom's systems are in the forefront of this technology and, according to analysts, will provide the spark for further rapid growth.

Aryt Industries Ltd.

	1992	1991
Sales	\$ 13.2 mil	na
Net income	\$ 777,000	\$ (256,000)

(Nine months ending September 30, 1992)

The company is seeking to find niches in communications and telecommunications. In November, Aryt raised \$8 million on the Tel Aviv Stock Exchange, and has the financial means to expand.

Lanet Data Communications

	1992	1991
Sales	\$ 34.4 mil	\$ 17.1 mil
Net income	\$ 10.2 mil	\$ 5.2 mil

(Nine months ending September 30, 1992)

From year to year, Lanet has achieved outstanding results. Yet the growth which carried the company to an IPO and its shares to a generous multiple cannot be maintained. The sales and earnings on a quarter-to-quarter basis point to this. In the third quarter, Lanet earned \$3.4 million on sales of \$12.2 million. In the second quarter of 1992, the company earned \$3.3 million on sales of \$11.74 million. However, the company is a sure bet to conclude over \$50 million in sales for 1992. It makes it an interesting vehicle for participation in the Local Area Network and data communications products industry in Israel.

Bophuthatswana Seeks Israeli Expertise

Bophuthatswana, located in Southern Africa, is eager to follow Israel's example in terms of the development of national infrastructure. Since late summer, its officials have visited Israel to identify those areas in which Bophuthatswana holds the greatest potential.

During his visit, George Macras, senior general manager of the Bophuthatswana National Development Corporation, held two seminars on the investment climate in Southern Africa. He observed that, in spite of the political volatility in the region, many Israelis are still keen on penetrating the Southern African market.

Israeli companies currently manufacture the following products in Bophuthatswana: textiles (specializing in yarn dyeing, spinning and weaving); safety doors; and sesame seed products, including Turkish Delight and techina. In addition, Chromagen – Israel's leading manufacturer of solar water heaters – announced in April that it will set up a plant in Bophuthatswana.

Macras identified the following areas of potential Israeli investment in his country: gold jewelry manufacturing, electronics, engineering, pharmaceuticals, health care, software & systems development, and consumer products manufacturing. According to Macras, the climate in Bophuthatswana is more conducive to living and working than Johannesburg, for instance, where racial strife and

ever-changing government policies mean one has to constantly look over one's shoulder.

Macras noted that the positive business climate in Bophuthatswana has attracted more than 400 foreign investors, and he surprised a few listeners when he reported that, of those 400, 90% have increased their initial investments and expanded operations. Ninety companies from the Far East, he pointed out, have operations in Bophuthatswana.

One reason for such success may be the high trainability of low-cost labor. Mr. Macras estimated hourly compensation for labor, including fringe benefits, at \$4.11. This may present an opportunity for cooperation with a highly research-and-development-oriented Israel – a partnership which will generate much-needed jobs in industry for both parties. Export of Bophuthatswana's abundant natural resources to Israel may also be worth investigating.

Agricultural Minister P.H. Moeketsi identified the following areas of Israeli agricultural technology that are of particular interest: development of a national water pipeline; drip irrigation; cultivation of vegetables in a hot, dry climate; advanced training in tractor usage and maintenance; cultivation of small cut flowers such as Baby's Breath; technology exchange and partnership for paprika processing; and technology exchange for force-feeding ducks.

Bophuthatswana operates a Trade Mission Office in Tel Aviv, headed by Tova Maori, the authorized representative. Ms. Maori is coordinating a 1993 trade mission to Bophuthatswana to investigate opportunities for investment.

Those interested in participating should contact her at 972-3-269-151.

Karen Gold Anisfeld

A Cardiac Monitoring Startup is Making Waves

One of the expectations connected with the massive immigration of Russians was that the new immigrants would bring technological experience and abilities not known in the West. In the context of Israel's technologically oriented community, the know-how would serve as the basis of startup companies, and R & D boutiques. The government of Israel therefore established a variety of programs to support such activities. These include grants for industrial R & D, and financial support for immigrant researchers, scientists, and others during the early stages of employment in industry.

Israeli entrepreneurs – including businessmen, patent attorneys and others – when faced with such a broad

range of technologies, have identified promising projects and are providing the impetus to move ideas, prototypes or innovations down the road to industry.

This process is occurring in various parts of Israel. Some projects find their way to technological incubators. More than 20 of these have mushroomed in the past two years. Others are being developed in existing companies. The projects are varied, and employ advanced skills in mechanical engineering, chemical processing, medical instrumentation and software design.

One of the the fastest-moving projects is one that aims to commercialize non-invasive monitoring equipment for hospitals and medical clinics. N.I. Medical, formed in the spring of 1992, has developed novel equipment based on years of experience in Leningrad in cardiac output measurements. Earlier models were tested on thousands of patients at the Leningrad Medical Center.

Sasha Zaglin, a 41-year-old immigrant, heads the company's research and development program at a facility in Ramat Hechayal, an industrial park near Tel Aviv. An engineer with advanced degrees in electronics and electrical engineering, Zaglin describes his prototype in simplistic terms:

"The electrodes are attached to the body, and various cardiac output measures are read and conveniently recorded. Currently, cardiac output measurements are carried out invasively. However, the procedure has three major problems: patient safety, cost, and ease of use.

"Monitoring cardiac output involves inserting a catheter into the patient's chest. The methods are risky, with a 1% mortality rate, cause pain, and do not enable physicians to store, recall and print records in any standardized way. N.I. Medical's bioimpedance unit is a breakthrough technology which uses known physiological principles and a series of proprietary algorithms."

Patents have been applied for in Israel, and will be applied for in other parts of the world, says Zvi Vromen, patent attorney and joint managing director.

Dr. Hylton Miller, head of the catheterization lab at Tel Aviv's Sourasky Medical Center, is carrying out clinical trials. He is enthusiastic about the advantages which the new technology offers, especially in measuring nearly two dozen cardiorespiratory and body fluid functions.

Clinical trials – required for international regulatory approval, as well as for eventual marketing purposes – are already planned in European medical centers.

Four-month trials in various countries will be followed by requests for regulatory approvals leading to a product launch. N.I. Medical is addressing the \$900 million annual cardiac output monitoring equipment market.

The prototype being used in the clinicals was completed in October 1992. Two other Russian immigrants -- one an international expert in cardiorespiratory monitoring and the other an algorithm expert -- are part of the N.I. Medical group.

Financial support has come from private sources connected with the company. However, the Office of the Chief Scientist of the Ministry of Industry and Trade is in the process of approving second-round financing. The OCS has already extended a research grant to the young outfit.

To move along the path of development, clinical testing and introduction, the firm will require substantial capital, and is likely to offer part of its equity ownership to venture capitalists and other investors. For those interested in obtaining further information about this project, *IHTIR* will forward inquiries.

Mathematics from the Weizmann Institute

An enterprise has evolved from the research of Prof. David Harel, head of the institute's applied mathematics and computer science department, whose major interest is the nature and theory of computing.

"One day in 1983," Harel recalls, "I got a call from Israel Aircraft Industries. One of their managers asked about some problems they were experiencing with the specifications of the Lavi fighter jet. [The Lavi project was abandoned for economic reasons after the construction of two prototypes.]

"The teams responsible for designing the avionics system were experiencing difficulties in accurately describing to one another its desired operational behavior. It soon became obvious that this 'Tower of Babel' syndrome was rooted in the absence of a clear, complete and unambiguous method for describing what the overall system under discussion did, or should do."

Following technical discussions that served to pinpoint the exact nature and magnitude of the problem, Harel was able to develop a new schematic language for describing the dynamic behavior of complex technological and electronic systems. Known as Statechart, this language provides a pictorial formulation that, once learned, enables specialists with diverse technical

backgrounds and professional skills to jointly specify and document the dynamic behavior of systems. The Statechart method was adopted by IAI.

And now a child is born!

After the initial success of the Statechart technology, Harel Pnueli and Pnueli's Scientific Technology co-workers, the Lachover brothers, set up Ad-Cad Limited to build Statemate -- the first computer-based tool for creating and analyzing Statecharts. Initial development was supported by IAI's corporate R & D organization, whose engineers took an active part in the specification of the tool, and later in its testing and enhancement.

The first version of Statemate was completed in 1987 by a staff of 20 programmers, including several graduates of the Weizmann Institute's MSc and PhD programs. An American company was subsequently formed to deal with marketing and customer engineering.

Offering unique solutions for many aspects of high-tech management and development, Statemate systems are now being used not only by IAI, but by aircraft manufacturers in the United States and by various other companies -- including some data-processing equipment developers and a major European manufacturer of rapid interurban trains.

Other relatives

Many developments emerging from the institute's faculty of mathematics have had an impact on the products of existing companies, both here and abroad. For instance, the sophisticated computation procedures known as multi-scale (or multi-grid) methods, developed by Prof. Achi Brandt, have drastically reduced the computer time required to solve complex problems in many areas of science and technology. The approach has been widely adopted in academia and in industry throughout the world.

The above material appeared in a publication of the Weizmann Institute of Science.

Former Russians are Being Integrated into the Weizmann Institute

The academic staff of the Weizmann Institute includes more than 400 full-time staff scientists, 120 long-term visiting scientists, and 180 engineers and academic personnel serving research programs. The high proficiency in basic science that is found among the 400,000 Russian immigrants has seen many of them taking positions at the institute. Nearly 20% of its scientific personnel are recent immigrants, reported Weizmann President Prof. Haim Harari.

ISRAELI COMPANIES WITH SHARES ON FOREIGN MARKETS

As of Dec 11, 1992

(IN MILLION \$)

P/E	MARKET VALUE SHARE HOLDERS EQUITY	SHARE HOLDERS EQUITY	MARKET VALUE	EPS IN LAST REPORT	NET INCOME				REVENUES				LAST REPORT DATE	% CHANGE			COMPANY NAME
					LAST YEAR	LAST QUARTER	SAME PERIOD 1991	LAST REPORT	LAST YEAR	LAST QUARTER	SAME PERIOD 1991	LAST REPORT		LAST YEAR	YEAR %	MONTH %	
47.4	7.47	4.95	37.00	0.17	0.42	0.15	0.12	0.59	2.09	1.01	1.20	2.66	30.09.92	NA	NA	21.31	EDUSOFT
negative	3.09	28.2	86.99	(0.99)	1.46	(3.06)	0.86	(6.22)	71.77	16.88	53.65	53.06	30.09.92	112.0	4.72	-4.31	ORBOTECH
28.7	4.91	36.4	178.95	1.12	5.74	1.70	4.13	4.67	43.94	10.86	31.56	32.37	30.09.92	80.0	137.50	15.54	IBS
35.4	11.48	19.3	221.60	0.75	4.27	1.77	3.37	4.70	35.20	12.90	25.20	36.30	30.09.92	314.3	-18.39	1.43	INTERPHARM
28.8	7.78	137.1	1,066.69	0.88	27.42	9.94	19.08	27.82	113.98	41.73	79.46	116.55	30.09.92	274.0	44.39	2.27	ICI TEL
23.7	3.50	202.2	707.78	1.30	35.55	7.37	18.59	22.41	409.58	109.33	300.02	331.98	30.09.92	85.0	65.66	-1.20	ELBIT
27.4	4.76	110.5	525.86	0.19	17.13	5.29	11.09	14.37	190.90	55.26	137.74	158.75	30.09.92	111.1	44.74	0.00	ELSCINT
22.7	2.17	149.0	323.87	0.62	20.33	4.70	15.80	10.70	404.00	145.00	404.00	439.00	30.09.92	132.7	23.14	-3.25	ELRON
16.5	1.83	9.3	17.06	0.15	(0.71)	0.26	(0.26)	0.78	6.44	4.30	0.18	13.20	30.09.92	-5.9	237.50	-3.57	ARYT
19.0	3.20	10.1	32.34	0.09	2.10	0.67	1.18	0.85	9.28	2.60	4.97	4.36	30.06.92	1,150.0	4.70	0.00	ESHERD ROBOT
negative	7.65	5.9	45.20	(0.06)	(0.13)	(0.19)	0.07	(0.33)	2.76	2.49	2.30	6.51	30.09.92	NA	146.43	-13.11	B.V.R
19.6	62.53	0.4	22.95	-0.06	(1.21)	0.27	0.08	0.59	6.04	1.50	0.76	3.33	30.06.92	181.8	132.26	2.86	TAT TECH
negative	3.27	5.2	16.93	(0.01)	(0.73)	0.01	(0.51)	(0.05)	2.69	0.99	1.94	2.77	30.09.92	200.0	57.14	-2.94	HEALTH CARE
21.2	0.91	120.5	109.61	0.15	1.39	2.55	2.18	3.89	49.58	63.06	25.50	155.24	30.09.92	-7.0	23.75	-5.71	ILDCY
38.3	4.76	231.4	1,100.92	0.78	23.30	6.86	16.57	21.54	321.00	95.05	241.50	281.02	30.09.92	67.8	110.60	4.95	TEVA
28.6	4.53	37.2	168.59	0.43	3.99	1.89	2.50	4.42	17.36	6.16	8.90	15.42	30.09.92	NA	NA	1.56	TELEDATA
16.1	5.77	1.3	7.38	0.05	0.20	0.08	(0.02)	0.34	1.80	0.07	0.08	0.41	30.09.92	550.0	23.08	-5.88	ESTEC
0.0	1.32	11.7	15.44	(0.05)	1.31	0.01	(0.09)	(0.12)	80.79	18.38	57.53	59.68	30.09.92	188.2	0.00	-9.26	CARMEL
30.5	4.94	2.13	31.83	0.15	0.03	0.44	(0.27)	0.78	31.10	7.20	23.25	21.73	30.09.92	0.0	65.52	4.35	LASER
33.3	4.75	21.90	104.03	0.41	1.51	0.90	0.73	2.34	3.34	1.88	1.89	5.18	30.09.92	NA	NA	-2.01	LANOPTICS
18.6	3.62	69.3	251.36	0.93	7.70	3.41	5.18	10.16	24.50	12.17	17.07	34.44	30.09.92	NA	33.09	-8.42	LANNET
46.5	8.60	5.8	50.12	0.23	1.01	0.36	0.65	0.81	5.37	2.76	3.13	6.99	30.09.92	NA	80.65	13.13	MAGIC
40.3	5.98	36.5	218.57	0.39	1.78	1.35	0.88	4.07	7.82	4.33	4.85	12.10	30.09.92	NA	NA	-2.35	4TH DIMENSION
6.2	1.26	125.3	158.20	2.25	13.20	2.80	8.49	8.56	276.30	70.60	198.60	209.90	30.09.92	40.6	0.91	-7.26	AIP
negative	0.10	8.6	0.85	(0.08)	(1.00)	(0.08)	0.56	(0.28)	19.27	3.35	16.56	12.94	30.09.92	150.0	-60.00	0.00	S.P.I.
15.2	2.90	610.2	1,768.53	2.06	100.56	32.42	72.82	87.15	430.20	144.47	313.35	396.47	30.09.92	136.7	17.61	-1.76	SCITEX
negative	3.15	14.3	45.85	(0.36)	0.52	(1.98)	0.28	(2.41)	37.93	8.65	28.90	29.00	30.09.92	9.1	50.00	31.71	OSMAP
negative	31.55	0.6	18.66	(0.01)	(0.65)	0.00	0.36	(0.13)	0.02	0.00	0.01	0.00	30.09.92	214.3	109.09	-17.86	IDAN
29.7	1.44	77.53	111.87	0.09	11.84	(0.45)	10.54	2.83	251.0	49.71	189.94	158.5	30.09.91	-20.8	15.79	0.00	ELITE
19.5	1.85	17.9	33.18	0.53	4.02	0.38	2.60	1.70	102.69	28.80	73.00	79.40	30.09.92	66.7	50.00	5.77	ETZ LAVUD
14.7	1.21	41.4	49.95	0.11	0.60	1.16	1.10	2.54	116.37	30.53	88.27	90.78	30.09.92	-17.2	50.00	-7.69	FRUTAROM
negative	2.59	9.4	24.30	(0.22)	0.21	(0.61)	0.78	(0.90)	28.70	9.11	19.71	24.51	30.09.92	82.4	-22.58	0.00	RADA
8.2	4.28	120.2	514.87	2.41	30.17	8.28	23.57	47.35	726.29	179.55	534.10	572.40	30.09.92	NA	NA	1.45	TADIRAN
39.3	17.14	4.4	75.49	0.16	1.40	0.53	0.93	1.44	20.60	7.19	14.70	19.30	30.09.92	104.3	40.43	-8.33	TARO VIT

Source: Bank Hapoalim

Harari also revealed that income from industry is making a substantial contribution to the operational budget. Last year, license fees, royalties and research grants from industrial firms totaled \$10 million. A number of projects which have been transferred to industry are expected to be commercialized in the foreseeable future, and will serve as a source of additional income.

Conference Report

Business Opportunities Presented at Conference

The 8th Meeting on Optical Engineering, held in mid December, attracted visitors from various parts of the world including Belgium, China, England and the US. They participated in discussions related to fundamental advances as well as emerging commercial applications. "The scene was chaotic. 100 individual project leaders fought hard to be heard. 40 presented projects related to business opportunities. Of the 40, ten were highly interesting. Many of the individual presentations showed lack of experience in presenting their projects," noted Robert F. Weiss, Chairman of the American Physical Science Inc. Mr. Weiss is seeking to develop joint venture possibilities or research and development relationships with Israeli firms. American Physical Science has annual sales of \$20 million.

Chinese businessmen, academics and professionals, in impressive numbers, are coming to Israel, to seek interaction with Israeli companies. "The Israelis have excellent technology and we feel that there is room for cooperative work especially in the field of electronics and irrigation," commented Mr. Wei Tianguang, Deputy Director of the China Association for Science and Technology. The visitor was one of a group of six that had come from Beijing in response to an invitation from the Association of Engineers and Architects in Israel.

One of the Israeli exhibitors, who asked not to be mentioned by name, has completed equipment sales of more than \$1.0 million to China. The initial contact between supplier and buyer began a short four years ago.

From swords to plowshares

Inframetrics Ltd., owned by Elbit Computers, exhibited systems originally developed exclusively for the military but now are successfully selling into the civilian market, for healthcare diagnostic applications. The early system was produced for the military for night vision applications in target sighting. The company is marketing diagnostic

equipment which measures blood circulation with the basic thermal imaging technology.

Diagnosing headaches and imaging systems for use in open heart surgery operating theatres are additional market segments for Inframetrics.

Projects which drew the greatest interest

Image Processing

- *Automatic Recognition of Vehicle Registration Plates
- *A Tennis Training Simulator

Materials

- *Infrared Optical Fibers and Systems
- *Electroluminescent Fibers
- *Early Detection of Cancer by Scanning Cells for Fluorescent Polarization

Radiography

- *A Workstation for the Computerized Analysis of Breast Cancer
- *Ultra Fast X-Ray Imaging detector

Sensors and Detectors

- *Automatic Petroleum Spills Detector

Subsystems

- *LIDAR for Meteorological Measurements and Air Pollution

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