

ISRAEL HIGH-TECH REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES

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From the Editor's Desk

A Blessing and a Curse

"Behold! I place before you a blessing and a curse," says the part of the Bible we read at this time of year. The miraculous flood of Russian Jewry, the amazingly short Gulf conflict, the prospect of a unified Europe and the sudden announcement of a regional conference to deal with the Israel-Arab conflict all have about them this double possibility. On the one hand, fulfilment of an age-old prophecy - all the Jews of the world returning to a prosperous Israel at peace with its neighbors - seems within our grasp. On the other hand....

Many of Israel's elite, including prominent former military leaders, are among those who retain an air of skepticism. This is traceable to past involvements in "start-and-no-go" efforts which followed military conflicts and ceasefires. These did not lead to any permanent peace agreements, with the exception of the Camp David Accords with Egypt. All other, tentative pacts were subsequently broken and followed by further hostilities.

This time, however, the international community seems intent on linking Israel's financial future (ie. a favored position in the united Europe of 1993) and its ability to offer a viable home to the world's Jews (ie. the \$10 billion in U.S. housing loan guarantees), to the achievement of a real peace with its enemies. Never before have the prospects of a Messianic age seemed more imminent, and never before has the choice been so clearly dependent on human actions. Truly, we (and the world) have before us "a blessing and a curse."

Thomas Friedman, Pulitzer Prize winner and a journalist who has spent time in Beirut and Jerusalem, recognizes the elusive nature of peace in this region. Mr. Friedman quite correctly points out the suspension of the rules of normal logic in a part of the world where one side can lose war after war and still claim victory, as Saddam Hussein does.

In spite of the continuing Arab boycott and the lack of free trade with Europe, Israel's economy has thrown off its Gulf War paralysis and seems poised on the threshold of unprecedented good health. Local

demand is on the rise, with housing leading the way. Activity on the Tel Aviv Stock Exchange has been brisk, and the trend sharply upward. The General Share Index recently surpassed the 400 mark - a new all-time high. Israel High Tech Report's editor, when interviewed on national television, pointed to the record level as being related to the public's expectation of accelerated economic activity as a result of immigration and renewed prospects for peace. The positive atmosphere generated by the "go-go" market cannot be dismissed as just another old-fashioned bout of greed, or a bubble which may shortly burst, though such a thing is never impossible. But at this stage there is a definite air of confidence in the future. The resiliency of Israeli business, especially its science-based industries, is well known. As a result of expectations of improved economies in the U.S. and Europe, exports are beginning to grow - in some cases to new record levels, leaving one with more than just a shred of hope that the small step toward the conference table will presage a giant leap out of the 43-year-old Middle East labyrinth.

As the country's political leaders prepare for direct talks with Israel's neighbors, new econometric studies are surfacing. These focus on the economic and social implications of absorbing 1.5 million people. This would raise the population by one third to 6 million by 1995, bringing closer the day when the majority of world Jewry is again in its Promised Land and, according to the Bible, the world's Messianic Age can begin.

The Bible however, says little when it comes to prescribing specific economic programs to cope with

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the increase in population. Journalist/economist David Krivine is to be thanked for his extraction of some of the key points of a 150-page document Ministry of Industry & Trade, and his analysis of the prospects, both on the down-side and upside. The net message here seems to be "no pain, no gain."

When we speak of "successful absorption," the goal is to secure for the newcomers the same quality of life as was enjoyed by Israelis before 1990. Is this doable? By 1995 the population will increase by 1.3 million, of which two thirds will be newcomers. For these, 450,000 new homes are to be built and more than 650,000 jobs are to be created. The estimate for a five-year housing and job-creation program is \$ 95 billion. The authors of the report, however, warn that if only part of the program is carried out, or carried out badly, the resultant economic strains and civil strife could precipitate a great exodus of Israelis seeking better economic opportunities.

Eighty-five percent of the cost of the program is to come from domestic savings, which implies a freeze on consumption and a sharp decrease in government spending. The remaining 15% is to be raised externally. The \$10 billion in housing loan guarantees which Israel is seeking from the U.S. is part of this external financing. Israel's foreign debt has fallen sharply in recent years. An increase in this figure, even a sharp upward increase, is seen as realistic, especially considering the country's unblemished credit record.

Unemployment could rise to approximately 250,000 of an estimated working force in 1995 of 2.17 million, or 11.5% - a relatively high but still acceptable figure. Even at the current rate of growth of 8% per year, exports will reach \$32.5 billion. A sizable gap in the trade balance will remain, however, as the import side is expected to grow at a similar rate.

Our own studies indicate that science-based industries have been exporting as much as 70% of their production. They hope to continue to expand their activities as they adjust to the new opportunities of trade with the European Economic Community, and in turn continue their joint ventures with Europeans and others who wish to enter the American market by way of Israel. The Economics Ministry points to industry and not agriculture as the economic bellweather of the future. It is these companies which will be featured in future issues, because they hold the brightest promise for international trade or investment by the individual, the corporate investor or the trading company...
...a blessing for everyone.

RECENT DEVELOPMENTS

Octel Acquires Allegro Intelligent Systems

Octel Communications Corporation, a leader in the voice information processing server industry, has announced the acquisition of Allegro Intelligent Systems Ltd.

Allegro, based near Tel Aviv, is a system and software firm that specializes in voice response systems and software. Allegro was a central resource in the delivery of Octel TransAct, a recently announced interactive voice response product. The new subsidiary will be called Octel Communications (Israel) Ltd.

"Octel is committed to delivering the best voice information processing applications to our customers. Acquiring Allegro adds even more depth to our software engineering and design efforts in new product development," said John Higham, Vice President, Engineering.

The Octel TransAct application package connects customers, employees and other callers with host databases, enabling them to collect and disseminate information and facilitate transactions automatically. It provides an interactive, menu-based voice response application generator that multiple departments can use to create applications without needing programming support.

Octel Communications Corporation (traded on NASDAQ) designs, manufactures and markets a complete line of voice information processing servers and software which is sold in North America, Europe, and the Pacific Rim. Octel's clients include small businesses, large multi-site corporations and telephone and cellular service providers.

Octel, founded in 1982 and with headquarters in Milpitas, California, had sales of \$128 million in 1990, up from \$87 million in 1989. Two years ago, the Israel-U.S. Binational Industrial Research and Development Foundation (BIRD) was instrumental in introducing the companies to each other, and their relationship has flourished ever since.

SOFTWARE GIVES BANKS ACCESS TO REUTERS FROM IBM TERMINALS

Substantial savings in the cost of using Reuters data and wider distribution of Reuters information throughout a bank and its branches are now possible, thanks to new software available from Formula Group, one of Israel's largest software houses.

Called G-Recs, the product allows banks direct access to Reuters data from authorized IBM

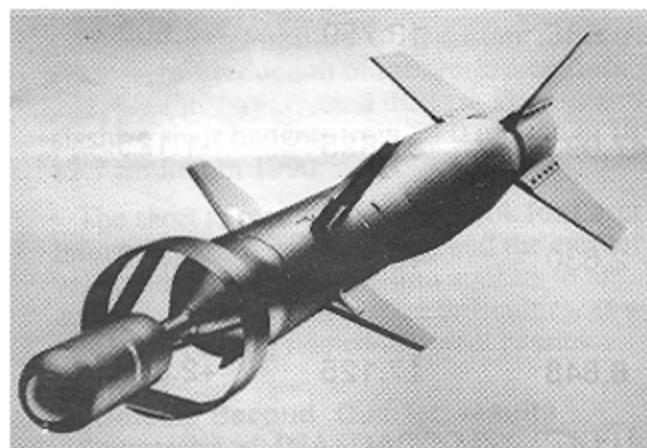
mainframe terminals. G-Recs provides an interface between the 3270 users community and Reuters data via Reuters standard hardware. Both VM/CMS and MVS/CICS versions of G-Recs are available.

G-Recs automatically saves the most current "page" for every predefined category, and makes it available for users and applications in the organizational environment. The G-Recs supervisor can distribute internal news, control and secure users' entry, monitor the activity for each page-per-user and more. G-Recs users can access Reuters information from the mainframe databases or, if authorized, get online, create personal files, print pages, set software timers for automatic updating, scroll within past data and more. Working habits and hardware investments are preserved, and users can use terminals or download data to personal workstations.

Mainframe applications can use Reuters data for integration, statistics, graphics, number-crunching and more. The product and the technology, after two years of commercial implementations, are being offered now to marketing partners abroad.

ELBIT'S "OPHER" MAKES "DUMB" BOMBS SMARTER

The vital role of "smart" weapons, and their devastating effect on the battlefield, was proven during operation "Desert Storm." Nevertheless, shrinking defense budgets combined with the prohibitive cost of such weapons put limitations on their acquisition by armed forces all over the world.



OPHER, Elbit's low-cost terminal guidance kit, was designed to overcome this problem. Its cost effectiveness is due to the following features:

- * Low procurement, operation and mission costs
- * High kill probability
- * Versatility with aircraft, operational profiles and targets

OPHER is an add-on kit that turns general-purpose bombs into accurate guided weapons. The kit uses a passive imaging infrared seeker (IIRS), suitable for day and night operation, and does not provide any warning to the target.



OPHER'S unique capability to autonomously acquire, home, and hit a variety of targets results in a substantial reduction in the cost and complexity of target strikes. This is expressed in terms of sortie effectiveness, shortened exposure to ground threats, increased number of kills per pass, and low life-cycle cost.

OPHER is delivered in the regular air-to-ground operational modes (dive release, low-altitude loft-toss, or very-high-altitude attack). The Opher Imaging Infrared Seeker is operational after release, and begins searching for true targets while ignoring countermeasures and decoys. Once a target is confirmed and acquired, Opher locks on it, corrects trajectory, and homes toward it by aligning the velocity vector with the line of sight.

OPHER is designed to target MBT, AFV, relocatable artillery and air defense, ships, missile boats, and runways. Opher requires no platform modification or special pilot training.

Israel's Air Force has already ordered the anti-tank version, and the kit is under consideration by several other Air Forces.

Israeli Companies on Wall Street

Selected income and earnings summaries for the quarters as noted, unless otherwise indicated. Nearly all of these companies are intensively export oriented. Prices are as of August 16, 1991 and the price changes relate to those a month ago.

<u>Company</u>	<u>Revs</u> (in \$ mil.)	<u>Net Income</u> (in \$ thou.)	<u>Price</u> (in \$)	<u>Net</u> <u>Change</u>
ELBIT COMPUTERS Defense electronics ELBTF OTC	196,067 Q1	10,409	22.500	-0.500
ECI TELECOM Telecommunications ECILF OTC	49,400 Q1-Q2	11,785	40.250	+5.250
ELSCINT Medical imaging ELT NYSE	90,200 Q1	6,600	6.000	+0.500
FIBRONICS Fiberoptics FBRX OTC	25,712 Q1-Q2	(1,182)	6.875	+1.250
INTERPHARM LAB. Biological products IPLLF OTC	16,000 Q1-Q2	1,800	49.750	+5.500
LASER INDUSTRIES Surgical lasers LAS ASE	8,605 Q1	81	3.875	-0.125
OPTROTECH Electro-optical systems OPTKF OTC	35,900 Q1-Q2	586	13.750	+4.500
SCITEX LTD. Computer graphics SCIXF OTC	173,567 Q1-Q2	47,093	31.625	-1.125
IIS INTELL. Computer peripherals IISLF OTC	20,830 Q1-Q2	2,630	18.250	+0.750
TEVA PHARMACEUT. Pharmaceuticals TEVYF OTC	80,817 Q1	6,848	17.125	+2.875
ELRON ELECTRON. ELRNF OTC	26,500 Q1-Q2	13,600		n.c

ISRAELI COMPANIES ON WALL STREET

Laser Industries' Beams of Light are Dim

The company whose motto is A Beam of Light for the Benefit of Mankind is sending out dim signals these days. After accumulating over \$21 million in losses over the preceding two years, the company was looking to 1991 as a pivotal year. In spite of an encouraging \$81,000 net income on sales of \$8.6 million in the first three months, however, it seems that the company is not likely to produce the type of strong turn-around that might be expected from a world leader in CO₂ laser surgery.

The problems are in the marketplace, especially in the U.S. At the recent shareholders' meeting at Laser House in Atidim, management reported that there has been a major trend reversal in the U.S.; electric cauterizing is giving surgical lasers serious competition. This does not bode well for Laser Industries or its competitors, which include SLT and Laserscope. These companies are expected to be very seriously affected by this trend, as well as by the ongoing recession and tight hospital budgets.

Though Laser Industries' management believes the firm will be less affected by the vagaries of the American market than will its competitors, one can expect a decline in American sales at least over the second and third quarters of the year. Last year, North America accounted for 70.2% of the company's total

sales of \$32.9 million. Cost-cutting measures have resulted in a reduction of the workforce from 380 to 171, but this has affected the R & D programs, slashing their budgets from \$4.0 million in 1988 to \$2.7 million in 1990.

The short to medium-term outlook for Laser Industries is not encouraging, and the current market valuation of about \$20 million appears to take into account the American market difficulties, as well as legal proceedings related to patent hassles.

Optrotech Second Quarter results

Optrotech Ltd. (NASDAQ/NMS:OPTKF) has announced revenues and earnings for the second quarter of 1991. The company's revenues and earnings for the quarter ending June 30, 1991 were \$16.4 million.

Revenues for the six-month period ended June 30, 1991 were \$35.9 million. There was a reduction in sales blamed on the slump in the printed circuit board industry prevailing in the U.S. and Europe.

Net income after tax in the three months ended June 30, 1991 was \$230,383. Net income in the first half of 1991 was \$256,919.

The Blaser, the first machine for fine-line inspection, has been delivered to a major computer manufacturer.

The Sprint 110, a new product based on the Image system, has been shipped to a major book printer in the U.S. The machine automates the stripping process and outputs full-size flats necessary for the creation of offset lithographic plates.

Scitex registration statement for Maxwell's shares

Scitex Corporation Ltd. (NASDAQ:SCIXF) has announced its intention to file a Registration Statement under the U.S. Securities Act of 1933 for a proposed underwritten public offering by Robert Maxwell Group PLC of up to its total of 7.1 million Scitex shares. The registration is being effected pursuant to Maxwell's registration rights under the private placement agreement by which it acquired its Scitex shares in 1989.

Mair Laiser appointed Managing Director of Clal Industries and Chairman of ECI Telecom

David Rubner, 51, Executive Vice President of ECI Telecom since 1977, will assume the positions of President and Chief Executive Officer of ECI.

From 1983 to 1990, Mr. Rubner served as General Manager of the company's Telecommunications Division. Under his leadership, ECI Telecom saw the highly successful introduction of Digital Circuit Multiplication and ISDN Integrated Services.

On ECI's management team since 1970, and a member of the Board since 1977, Mr. Rubner has filled a number of senior management positions in R&D, production and marketing. He replaces Mair Laiser, who has been appointed Managing Director of Clal Industries and Chairman of the Board of ECI Telecom.

ISRAELI ANALYSTS CREATE PERCEPTIONS OF OVER PRICED SHARES

Israeli companies with securities listed in the U.S. are experiencing one of their best two-year periods - both in profitability and in share performance - in the past decade. Computer-based high-tech companies such as Scitex in graphics or unique product companies such as ECI Telecom have attracted international attention to the Israeli high-tech scene, and fresh money has flowed into the securities of these companies.

Savvy Israelis, however, got there first. Getting in is one thing, however, and getting out is another. Since no one in Israel has a divining rod, the newspapers become a major source of information. Israeli analysts, however, do not use the same valuation techniques as do their counterparts on Wall Street. This is not to suggest that they are not good, but rather that their analysis is more theoretical and less market attuned.

An analytical table in a recent copy of the leading Israeli daily Ha'aretz was captioned "in spite of the improvement in earnings, the p/e ratios are high." The table was highly professional, and contained a wealth of valuable information such as market, valuation, profit for the quarter ending June 91, profit for the quarter ending March 91, profit for six months 1991, profits for six month 1990 and change in profit level.

So far so good, but the last three columns contained the price earnings ratios (p/e) based on the past 12 months, the p/e based on the past six months annualized, and the p/e based on the past 12 months annualized. Israeli analysts feel secure in calculating and analyzing figures on past performance, but are uncomfortable in preparing and publishing analyses which take into account future performance.

Elbit Computers, which recently touched a year's high at over \$26, was seen as over-priced by Israelis who might have been reacting to an annualized six-month p/e ratio of more than 39. The fact that this annualized figure was based on the past six months' performance, and did not take into account estimates for the whole year - which would have substantially reduced the p/e ratio - has been overlooked by the Israeli public. As a result, Israelis sold shares in Israel and on the American over-the counter market. Teva Pharmaceuticals, Elron Electronics and American Israeli Paper Mills shares all slumped in the aftermath of the announcements of their earnings. In all the cases mentioned, the earnings were good, but Israeli analytical methods accorded the shares high price-earnings ratios, and this resulted in downward selling pressures.

As Israeli investors took their profits - and there have been plenty of profits to take - others apparently have been snapping up the shares. The shares of the more visible companies such as Teva, Elbit, Scitex and ECI Telecom continue to offer additional potential for investment profits. These companies are expected to extend their profitability into the foreseeable future. Some of the lesser-known companies such as Eshed Robotec and Healthcare Technologies also appear to have upside potential.

Eshed is already a profitable business in learning and industrial-linked computers, and appears able to expand meaningfully into 1992. Healthcare Technologies is the best bet in Israeli diagnostics, a field which is beginning to expand. Healthcare should get out of the red and into the black in 1992.

The share market fell by 12% in response to the news of the deposing of Russian President Mikhail Gorbachev. It was the single largest fall among the world's stock exchanges.

RADA raises \$3.5 million

RADA Electronics Industries - developers, manufacturers and distributors of sophisticated electronic equipment, electronic components, functional circuits and sub assemblies and airborne systems - has raised \$3.5 million by way of a private placement. The money will be used to finance further development of commercial applications for RADA's automated test equipment for aircraft systems, and the introduction of new research and development projects.

The placement represents a dilution of 13.3% of all shareholders; 540,000 shares were sold at \$6.50 per share. Poalim Capital Markets & Investments served as the merchant banker for the issue, charging 4% of the capital raised. Shares were sold to a variety of financial institutions. RADA's shares are traded over-the-counter in New York.

New I.I.S. color terminals

Haifa-based Intelligent Information Systems has introduced two new color terminals - IS-372C and IS-372D - which operate in the IBM mainframe environment and are compatible with IBM 3472C/D terminals. The office services software, Alice, is hard-wired in the IS-372 model, which includes facilities such as telephone directory, diary, calculator, reminder and conversion tables. I.I.S., whose shares are traded over-the-counter in New York, had 1990 sales of \$36.2 million.

DOES ISRAEL NEED WEST BANK WATER?

Must Israel maintain its hold on the West Bank to make sure that Tel Aviv's water taps don't run dry?

Like most of the densely populated coastal plain, Tel Aviv draws most of its water from an aquifer which straddles the pre-1967 border. Experts at a recent symposium organized by Tel Aviv University's Department of Geography were divided as to how this situation should affect a peace settlement.

Outgoing Water Commissioner Tsemach Yishai

maintained that Israel must retain control over part of the West Bank in order to control the water sources. But Tel Aviv University Economics Professor Gideon Fishelson insisted there are other ways to provide Israel with the water it needs. "There is enough water here. Just don't waste it," he said.

The debate was held as Israel grapples with a severe water shortage and warnings of disaster next year if there is less than average rainfall. Israelis are already barred from filling private swimming pools and washing cars with hoses. Agriculture minister Rafael Eitan tried to ban irrigation of parks and private gardens, but a public outcry - including severe criticism by municipalities and environmentalists - forced him to compromise. Now parks and gardens may be watered sparingly at night. Supplies of fresh water to agriculture have been cut by nearly one third compared with last year.

Fishelson maintained that government subsidies encouraged farmers to grow crops such as cotton, which consume large quantities of water, seriously depleting Israel's water resources. "Farmers use 60% of Israel's water, and some of them cannot afford to pay a realistic price for it," he stressed.

Israel doesn't need such extensive agriculture, he said. The agricultural sector accounts for only 5 or 6% of Israel's Gross Domestic Product, and employs only 4% of the work force.

"We have to climb down from the tree called farming, or move from the type of farming done today to one which is capable of paying a water bill of 40 cents per cubic meter." Farmers now pay less than half that. Israel could also desalinate water, at 50 to 60 cents a cubic meter, he said.

Yishai blasted Fishelson's proposals, claiming wide-scale desalination will not be feasible in the next 10 years. Small desalination plants may be built in several places, but they could not meet the shortage.

Yishai also rejected the suggestion of shifting to high-tech agriculture. It would be too expensive to shut down huge cotton fields and open greenhouses. Israel is saddled with security, immigration and water problems "and you can't demand that it invest hundreds of millions of dollars in developing advanced agriculture."

The Water Commissioner's conclusion was that the rains which fall over the western hills of Samaria and nourish the Sharon-Samaria aquifer are vital to this country. Lake Kinneret is not the coastal plain's prime source of water because the water "must always be the best, the closest and the most reliable,"

he argued. "If we don't want to endanger most of the urban population, this central aquifer should be our major source of drinking water for 10 to 15 years. The hand on that tap must be Israeli," he insisted. "All we need is a border correction which will leave a 10 to 12-kilometer wide strip of the West Bank in Israel's hands."

But Fishelson was adamant. "Do you want to keep on growing cotton?" he said. "Water is not a factor in the Middle East dispute. It can, however, be an obstacle to a settlement. Those who do not want peace can use it as an excuse for not making peace."

KIBBUTZ INNOVATIONS

The water shortage has forced the kibbutzim to phase out many agricultural branches and seek industrial alternatives, particularly in the high-tech sector. Some examples of the change include: Kibbutz Dvir, which has formed a company called Dvir Software to market its Q-Text word processing software; Kibbutz Kerem Shalom, which manufactures metal keyboards able to operate in extreme temperatures; Kibbutz Givat Brenner, which has developed a computerized cattle-feed control system which oversees feed inventories and calculates feeding quantities and schedules; and Kibbutz Hefziba, which has sold its computer-controlled irrigation system to three golf courses in Japan.

Other innovations include a communications network called Kibbutz-Net, which will interconnect 56 settlements in the Negev and Arava. The system is being installed by Kibbutz Bror Hayil in conjunction with Trendline Financial Information. The network will provide facilities for electronic mail, facsimile and access to the databanks of the buying cooperative and kibbutz roof organizations. Plans call for establishment of a national computer network called Agronet, which will interconnect 280 kibbutzim.

Israel High-Tech Report Index*

341.04 + 10.32 %

*ISRAEL HIGH-TECH REPORT INDEX is a weighted index made up of the shares of leading high-tech companies.
BASE=100 AS OF Sep 30, 1984

MORE RECENT DEVELOPMENTS

Pharmos

Pharmos Ltd. is a new privately held pharmaceutical company based in Kiryat Weizmann, near the Weizmann Institute. Pharmos has exclusive worldwide rights to develop and commercialize 15 products derived from two novel technologies, the first of which is its pending patent for drug delivery and formulation technology, the "Sub-Micron Emulsion Technology" or SME Technology, and the second of which is a patented New Chemical Entity ("NCE") derived from a cannabinoid series, code named HU-211, which appears to have significant neuro-protective properties. Pharmos seeks to develop and market novel SME formulated ophthalmic drugs, and in the longer term to develop novel analogs of cannabinoids for use in stroke.

Pharmos intends to apply SME Technology to improve the eye absorption and surface retention of ophthalmic drugs. SME Technology can formulate sparingly soluble or lipophilic drugs in very small emulsified oil droplets from 50 to 200 nanometers in diameter.

The ophthalmology drug market has revenues of about \$500 million in the U.S., and has been growing during the past five years at about 12% per annum.

The patented NCE, HU-211, is a cannabinoid derivative and an NMDA antagonist. HU-211 has shown significant neuro-protective properties in a number of animal studies, while not demonstrating psychoactive properties and having an acceptable toxicological profile.

Pharmos believes that HU-211 and its derivatives offer a development opportunity targeting two primary markets: nerve damage that may occur with stroke, and optic nerve damage that may occur with glaucoma. SME drug-delivery technology appears well adapted to the formulation needs of CNS drugs such as HU-211, which must cross the blood/brain barrier.

Dr. Haim Aviv, a founder of Pharmos, was the co-founder, CEO, Chief Scientist and a Director of Bio-Technology General Corp., a publicly traded company engaged in the development of products using recombinant DNA. Mr. David Blech, co-founder of Pharmos, has been engaged in organizing and investing in biotechnology companies.

In addition, Pharmos is able to draw upon strongly developed relationships with the Hebrew University

of Jerusalem, formalized in certain research and licensing agreements.

UNITED STATES ISRAEL BINATIONAL SCIENCE FOUNDATION

At its annual meeting in Jerusalem this summer, the BSF's Board of Governors approved the support of 91 new research projects, totaling \$2.6 million. This is a reduction of 30% over the previous year. An increase in the income of the Foundation was not achieved during this fiscal year.

Most of the 377 currently funded projects are three-year programs, of which 286 are ongoing, with funding of \$9.3 million.

DSP GROUP, ASAHI KASEI SIGN LICENSING AGREEMENT

DSP Group Inc., a leading supplier of digital signal processing (DSP) chipsets for consumer and commercial electronic products, and Asahi Kasei Microsystems Co. Ltd., have announced the signing of a multi-million dollar technology licensing and product development agreement. The companies will jointly design a digital communications chipset for the Japanese market, using DSP technology developed by DSP Group. Asahi has the right to sell selected DSP Group chipsets on a worldwide basis. In addition to the licensing payment, DSP receives limited distribution rights for the jointly developed chipset. DSP maintains a design center in Israel.

U.S. FIRM PAYS \$5.6 MILLION FOR DISTRIBUTION RIGHTS FOR ISRAELI MEDICAL DEVICE

Respironics Inc. of Murrysville, Pennsylvania, a manufacturer and distributor of medical products, has signed a \$5.6 million, three-year agreement for the U.S. distribution of a respiratory device invented by an Israeli doctor.

The device, called the Hayek Oscillator, after its inventor, Dr. Zamir Hayek, assists respiration by non-invasive, external means - a new state-of-the-art in assisted respiration, which until now has been carried out almost entirely by invasive methods such as intubation.

At present the Oscillator is being used in England, Canada, Japan, Spain, Finland, Sweden, South Africa and Israel.

GTM HAS BEEN ACQUIRED BY FORMULA GROUP

GTM business communication software products are already in use in many of Israel's leading industries

including: Paz Oil Co., Israel Electric Co., Weizmann Institute, IBM Israel, Israel Aircraft Industries and more, interfacing 3270 users with fax, telex, and E-Mail services. Formula Group, one of Israel's largest software houses, is a leader in IBM mainframe and office environment products and projects. The company is publicly held, and is traded on the Tel Aviv Stock Exchange.

Mashov U.S. Issue

Mashov Computers is planning to raise \$6 million in the U.S. with an over-the-counter offer of one-third of its share capital. The issue is in the final stages of preparation, and Mashov will shortly apply to the Israel Securities Authority for authorization. In 1990, Mashov reported \$3.5 million in sales of its MAGIC database management software. Since the beginning of the year, the company's shares have risen 180% on the Tel Aviv Stock Exchange.

Idan U.S. Issue

Idan Software Industries is planning to raise \$5 million in the U.S. Trading in Idan shares on NASDAQ has been halted, as during the past month the price jumped by a factor of eight; the U.S. authorities stopped trading pending investigation.

Hong Kong plant to Tirat Hacarmel

The Israeli subsidiary of U.S. manufacturer Kulicke and Soffa has convinced the parent company to transfer its Hong Kong plant to Tirat Hacarmel. Established in 1969, the Haifa-based subsidiary develops and manufactures precision equipment for the semiconductor industry, such as machines to slice wafers of silicon or solder semiconductors.

Managing Director Asher Brockman proved that the Haifa plant could manufacture the same products for considerably less than in Hong Kong. Equipment used for delicate gold-wire soldering of semiconductors costs less by a factor of six in Israel, and devices previously produced by 350 people in three shifts are being produced in Israel by 120 workers in one shift.

Rapid Gas Dryer/Purifier

A novel apparatus for the drying and purification of air and other gases has been developed by Prof. Ram Lavie of the Technion's Faculty of Chemical Engineering. Using off-the-shelf components, the system uses a rapid thermal swing adiabatic process which takes advantage of the internal heat of the processed gas.

The new development is intended for uses which require a high but not extreme degree of product

dryness. The processed gas will be enhanced by approximately one order of magnitude beyond condensation.

The new device offers significant economies, since it is far more compact than equipment currently used for this purpose, and requires little energy. It will be useful in the long-distance transport of gas through pipelines, the supply of fuel to supercharged internal combustion engines and many compressed air installations. The system has been patented in Israel, the U.S. and Canada.

Riebman moves against Tadiran

U.S. businessman Lee Riebman, acting on behalf of the U.S. company A.E.L., has asked the U.S. government to assist in collecting \$26 million from Tadiran or from Tadiran parent company Koor Industries. The money is owed for the sale of A.E.L. subsidiary Elisra, for which Riebman received 6% of Tadiran shares redeemable in 1990. On applying to both Tadiran and Koor, he was informed that the companies could not pay. Koor proposed that he join negotiations with other Koor creditors and waive part of the debt. Riebman refused, and the matter is now in arbitration.

New workstation from Elscint

Elscent, the Haifa-based manufacturer of medical imaging systems, has developed a new workstation for processing of computerized tomograph (CT) and magnetic resonance imaging (MRI) outputs. The new workstation, named Gyrexview, provides the diagnostician with a tool to view outputs in different dimensions. Gyrexview capabilities include oblique and curved reformatting, image leafing, zooming, panning, three-dimensional single and multi-tissue imaging, and generation of angiographic images. The workstation can be attached to a laser printer for hard-copy output.

Desert clean-up for agriculture exports

Plans are under way to convert the southern central region of the desert for exports of fresh pest-free produce. Agriculture Ministry Managing Director Gadi Shalipin says current exports to Japan, Canada and the U.S. are negligible due to the stringent regulations applicable to pest-prone produce. Israel exports mainly to Europe but, due to reduced profitability, new markets are necessary, says Shalipin. The Ministry of Agriculture, together with the Jewish Agency Settlement Department, has allocated a budget of NIS 400,000 to eliminate pests such as the Middle East fruit fly, and is planning to invite representatives of the three countries in order to promote sales of produce.

New science development project

The Jerusalem Development Authority and Yissum Research and Development of the Hebrew University have established a joint company to develop a "technology incubator" in Jerusalem. Some \$2.5 million is to be invested in the new company, which will be used to create a commercial framework for R&D projects of new immigrants and others which have industrial potential.

More Bezeq share issues

The Ministerial Committee for Privatization headed by Prime Minister Yitzhak Shamir has decided to float an additional 23% of the government-owned telecommunications company, Bezeq. In the first stage, 9% of shares will be offered to institutional investors by private placement, and the remaining 14% is to be sold to a strategic overseas investor in telecommunications.

Rafael in final three

Weapons systems developer and manufacturer Rafael is one of three companies remaining in the U.S. Department of Defense tender for a surveillance system to be installed on short-range UAV's (unmanned aerial vehicles). The system is designed to provide views of the battlefield by day and by night. Final selection is expected in January 1992.

Elta sale delayed

The plan to privatize Elta Electronic Industries is being held up due to problems relating to the confidentiality of defense information. Sources say that parent company Israel Aircraft Industries may apply to the Israel Securities Authority for authorization to withhold classified security information and details of clients and transactions in specific countries. Elta registered a net profit of \$13.4 million in 1990, compared to \$14.5 million in 1989. Annual sales total some \$200 million. In 1990, Elta invested \$18.1 million in R&D, closing out the year with an order backlog of \$532 million.

JCSS study: Israelis favor nuclear deterrence

Israelis interviewed after the Gulf War were united in wishing this country would develop a nuclear bomb. But on many other issues, the gap between hawks and doves seems to have widened as a result of the war.

This emerged in a public opinion survey carried out by Tel Aviv University's Jaffee Center for Strategic Studies. Prof. Asher Arian, who conducted the survey, told a press conference here that 91% of the respondents said they favored development of a nuclear weapon. Only 78% said so in 1987.

The number of people who could countenance the use of nuclear weapons increased "astoundingly" over the past few years, he added. Eighty-eight percent of the respondents said they would tolerate use of a nuclear weapon. Only 53% said so in 1987, and a mere 36% in 1986.

The survey suggested that Israelis seek nuclear capability to deter Arab countries from using non-conventional weaponry. Israelis did not seem to think they need the nuclear bomb in order to overcome Arab numerical superiority in conventional weaponry.

Thus 75% of the respondents said they were willing to abandon all non-conventional weapons providing the enemy also did so. There was far less readiness to accept limitations in the size of conventional forces.

Prof. Arian said he believed this attitude reflects confidence in the Israeli army in the event of a conventional war. However, confidence in Israel's ability to cope with a non-conventional war has been "shaken somewhat" he said.

ISPIM '91

International Society for Product Innovation Management - 7th International Conference on Innovation Strategies - Concepts, Implementations, Competitive Advantage - will be held in Israel, October 6-10, 1991.

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