

ISRAEL HIGH-TECH & INVESTMENT REPORT

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Small Can be Beautiful

Observers of Israel's economy have criticized it as not being capable of nurturing large mega type companies. Senor and Singer whose book the Startup Nation has been widely acclaimed mention this. However, first of all this is not true. Among Israel's mega concerns we have Iscar, Check-Point, Teva Pharmaceuticals, Converse and Amdocs, among others. However, the relationship between large and medium sized companies exists and is worth studying.

Probably the most startling fact is that Israel does not possess a pool skilled management. The fact is that managers try to achieve quick success even though it is at a price lower than what they could get for a larger company. Israelis value commercial success and everyone knows the names of SteffWertheim, Gil Schwed and Eli Hurwitz. We would think that is just as difficult to create three successful companies as one large one.

There is also the question of historical background. Swiss watches are known world wide as are Belgium chocolates.

There are many Israeli computer based companies. This is the case due to the experience that Israelis get in the elite intelligence army units. We find the criticism unwarranted. It is like saying why don't the authors

produce best sellers. We for one, wish success to startups whose business is every aimed at small niche markets.



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Water pioneer TaKaDu wins global Cleantech 100 Award

On Tuesday, while Israelis celebrated the release of Gilad Shalit, the Israeli soldier held captive in Gaza for five years by Hamas, the team of TaKaDu, an Israeli start-up had another reason for celebration. That same day their company was the "Company of the Year – Europe & Israel" in the prestigious 2011 Global Cleantech 100, organized by Cleantech Group in collaboration with the U.K.'s Guardian News and Media.

Established in 2009, TaKaDu is providing an innovative solution to a multi-billion dollar problem – the lost of 25-30% of the world's water production, which is also known as Non-Revenue Water (NRW). Two-thirds of NRW is due to real losses, the result of invisible leaks and the remaining third is due to operational issues such as faulty meters or water theft. TaKaDu provides a Software-as-a-Service (SaaS) solution for monitoring water distribution networks, which is based on complex algorithms that analyze existing online data from meters within the network (flow, pressure, etc) and external data (weather, holidays, etc). The system helps utilities by detecting, alerting and providing real-time insight on leaks, bursts, zone breaches and other network inefficiencies.

"TaKaDu is emblematic of the state of global cleantech innovation today," said Richard Youngman, MD Europe and Asia of the Cleantech Group. "It speaks to how critical a role information technology has to play in solving the world's resource, in this case water, efficiency challenge. And its quick rise to prominence shows the advantage of being a capital-light venture, and having a business model and a technology that even the slow and ponderous utility world can adopt quickly. Our global expert panel were strong in their praise, with admirers

from California to China."

Youngman's comments echo TaKaDu's belief that the current state of global water shortages is more of a water management crisis. By better managing the water distribution infrastructure, TaKaDu explains, water loss can be reduced, and so will the need for new water sources.

The company started operating two years ago, backed by investment from the venture capital firms Gemini Israel Funds, Giza Venture Capital and Emerald Ventures. So far the company has already publicly announced five customers, including Thames Water, the UK's largest water utility, and there are quite a few more that are to be announced.

CChemChina completes Makhteshim Agan purchase

Koor will report a net profit of NIS 582-674 million on the sale. Makhteshim CEO Erez Vigodman will receive NIS

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16 million for his options.

The sale of agrochemicals manufacturer Makhteshim Agan Industries Ltd. by Nochi Dankner-controlled IDB Holding Corp. a(TASE:IDBH) to China National Chemical Corporation (Chem-China) subsidiary China National Agrochemical Corporation was completed today. The TASE suspended trading in Makhteshim's share today.

Makhteshim has become a private company, 60% of which is owned by Chem-China, and 40% by Koor. IDB subsidiary Koor Industries Ltd. (TASE:KOR) received \$1.1 billion, including \$168 million for 7% of Makhteshim and \$960 million in a non-recourse loan secured by its remaining 40% stake in the company. Koor will report a net profit of NIS 582-674 million on the sale in its financial report for the fourth quarter and its shareholders' equity will increase by NIS 655-747 million.

Makhteshim's existing management team will continue to lead the company, and its headquarters will remain in Israel. The company intends to continue operating all of its existing global manufacturing facilities. It will also seek to capitalize on its strong base in China to further expand its global infrastructure and its ability to offer the industry's leading portfolio of crop protection solutions.

With the closing of the sale, all Makhteshim employees' options will be cancelled, as a condition of the deal. The company will buy all the options held by 130 employees and managers, including ten top executives. The options will be purchased at their fair value for a total of NIS 73 million, including NIS 16 million that will be paid to Makhteshim president and CEO Erez Vigodman.

Makhteshim noted that its merger with ChemChina is the largest transaction ever concluded between a Chinese and an Israeli company, and was a

major milestone in its 66-year history.

Makhteshim chairman Ami Erel said, "I want to thank the board of directors for their contribution to the complicated procedures required to obtain approval of the merger, and members of management, headed by Erez Vigodman, for their leadership, management, and hard work during this period.

Koor's share price rose 4.6% in morning trading to NIS 44.48, giving a market cap of NIS 2 billion, and the share price of its direct parent company, Discount Investment Corporation (TASE:DISI), rose 4.4% to NIS 37.60, giving a market cap of NIS 3.1 billion.

Is the future rosy?

Israel has become a high-tech superpower over the past two decades. Can the good news last?

Israelis tell a joke about a Jew who takes to reading Arab newspapers. A friend, puzzled, asks him why. If I read the Israeli papers, all I hear is bad news about the Jews, he replies; but the Arab papers constantly claim we are all rich and successful, and rule the world. These days the hero of the tale has another source of good news about Israel: the business press. Over the past two decades Israel has been transformed from a semisocialist backwater into a high-tech superpower. Adjust for population and Israel leads the world in the number of high-tech start-ups and the size of the venture-capital industry. Twenty years ago Harvard Business School's leading guru, Michael Porter, devoted just one sentence of his 855-page "The Competitive Advantage of Nations" to Israel; today there is a growing pile of books on Israel's high-tech boom, most notably "Start-Up Nation: The Story of Israel's Economic Miracle", by Dan Senor and Saul Singer.

Israelis are rightly proud of their high-tech miracle. They lap up books like "Start-Up Nation" and delight in talking

about their country's successful IPOs. They are also proud of how it was one of the last countries to enter recession and among the earliest to exit: the economy grew by more than 4% in the year to September. But for all its success the Israeli boom nevertheless raises a number of troubling questions.

First, does the economy rest on too narrow a base? High-tech industries employ only 10% of the workforce but account for 40% of exports. Second, why has Israel proved so bad at turning start-ups into domestic giants? It has 3,800 high-tech start-ups but only four high-tech companies with sales of more than \$1 billion a year. Third, is Israel capable of producing content for the internet as well as just the hardware and software that constitutes its "plumbing"? And, fourth, why has the land of the high-tech miracle got one of the rich world's lowest labour-participation rates, just 55%? These questions all add up to one bigger one. Is the Israeli miracle sustainable? Or did it result from a peculiar combination of circumstances in the 1990s? In this se

Israel's policymakers are well aware of all this, and are thinking hard about the solutions. They have identified a number of areas with high growth potential, such as water management, agricultural science, alternative energy and of course security, in which Israel already has world-beating technology. In the life sciences, the government is seeking to speed up the creation of firms by setting up venture-capital funds. However, Israeli officials worry that the country is still lagging in its ability to "turn tomato seeds into tomatoes"—to transform start-ups into the sort of giants, like Google and Cisco, that Silicon Valley regularly produces. Such giants, they note, create a greater proportion of high-paying jobs than start-ups. They also worry that Israeli entrepreneurs are taking longer than they used to in turning an idea into an IPO.

One good sign is the emergence of some Israeli companies which are concentrating on providing content for the internet rather than just the plumbing. JVP, a venture-capital company with more than \$820m under management, focuses on developing companies that fuse content with technology. Erel Margalit, the firm's founder, argues that Israel has as much of a comparative advantage in culture as in high-tech: the Jews, he points out, have always excelled in telling stories. Although Jerusalem, where Mr Margalit is based, is synonymous in many people's minds with endless cultural and religious conflict, he argues that it nevertheless stands to benefit from being the meeting-point of three great civilisations.

Going beyond Israel's "Start-Up Nation" model will not be easy. The country's business culture focuses more on dealmaking than on company-building. The army's technological prowess, which provided the know-how behind many a start-up, does not translate as well into providing the internet with content as it did in providing it with plumbing. Israel also has much better links with America and Europe than with the rising powers of Asia.

There are nevertheless reasons for thinking that Israel's strengths will endure. The government is trying to apply the venture-capital approach that it applied so successfully to start-ups (igniting private-sector creativity rather than picking winners) to late-stage financing. The army is more than a high-tech incubator. It sifts the entire population for talent, giving the most promising techies intensive training in elite units, and inculcates an ethic of self-reliance and problem solving.

Israel is also good at the sort of

technological mash-ups that produce exciting new industries. The inspiration for camera pills (which transmit pictures from inside the human body) came from missiles that can “see” their targets, and the inspiration for heart stents came from drip-irrigation systems. The country has long turned adversity into a source of competitive advantage. For example, it became a world leader in alternative fuel partly because hostile oil-rich countries surrounded it.

However, the main obstacle to Israel’s long-term economic success has nothing to do with how it creates firms. It lies in its failure to assimilate into its business culture both Arab-Israelis and ultra-orthodox Jews, who will together be about one-third of the population by 2025. Only 39% of ultra-Orthodox men and 25% of Arab women are employed. Think-tanks such as the Milken Institute are trying to encourage small businesses in Arab-majority areas such as Galilee and the Negev. Both these economic problems will only be solved by political will: Israel needs to work harder at dealing with its internal Arab problem; and it needs to tell its ultra-orthodox Jews that, however hard they pray, the rest of the country does not owe them a living.

NICE Systems gets Eiffel Tower order

NICE Systems Ltd., which makes data and voice recording devices for companies, said it received a follow-on order to provide video security system technology, for the Eiffel Tower in Paris.

NICE said the system uses advanced digital video analytics, to retrace the steps of suspicious individuals and to verify whether they represent a security risk.

Agilent opens R&D center in Israel
Patrick J. Byrne president of Agilent Technologies Inc. (NYSE: A) Electronic Measurements Group recently visited Israel to open the company’s

new R&D center.

Byrne said that due to developments in the communications industry and Israel’s centrality in the wireless equipment industry the center would suit Agilent’s new technology needs. “The wireless communications industry is undergoing convergence to IP. Technology such as WiMAX is based on this convergence, which is the future of mobility. There are many semiconductor companies in Israel working on solutions that will be the future of the mobile world. I see the convergence of market forces in Israel as something that enables us to be in the forefront of the semiconductor industry, solutions that will later go to equipment companies”.

India to purchase Israeli-made anti-aircraft missile systems

Indian Air Force Air Chief Marshal SP Tyagi has announced that India intends to purchase 18 Israeli-made SPYDER anti-aircraft missile systems to bolster India’s aging defense establishment. . Developed by RAFAEL, a leading Israeli defense contractor, the SPYDER can track up to 60 targets at a time.

The main components of the SPYDER system are the truck-mounted command and control unit, the missile firing unit with Python 5 and Derby missiles, a field service vehicle and missile supply vehicle. The vehicles are air-conditioned and also provide protection against biological and chemical warfare (BCW). The system is based on a modular design and system maintenance in the field is through very quick module replacement.

Tyagi said the deal’s finalization is pending the authorization of India’s ministerial security committee.

SPYDER truck-mounted air defense system uses a combination of active radar missiles and infrared missiles to track and intercept jets, helicopters, unmanned aerial vehicles and precision guided munitions.

FDA approves NESS device for moving paralyzed legs

Medical device company NESS Neuromuscular Electrical Stimulation Systems Ltd. announced that it received US Food and Drug Administration (FDA) approval to market its NESS L300 device for moving paralyzed legs.

The company's announcement follows a previous one in which it reported it received European CE Mark certification for its product. The company estimates the market for its product in the US to be worth in excess of \$2 billion, and said it expects a substantial increase in sales following the FDA approval and the launch of marketing in the US.

CEO Shmuel Shany stated that the product was designed for use by rehabilitation centers and private patients. "In the US, there are 2,000-3,000 rehabilitation centers and these centers can buy the devices and supply them to patients. The equipment can also be used by private patients in their own homes." The company intends to sell the L300 at \$6,000 per unit, and is in talks with medical insurance providers to finance the purchase for private users who can't afford to buy it themselves.

NESS's main investor is Teuza - Venture Ltd. (TASE:TUZA) with a 34% stake. Other investors are businessman Alfred Mann, BG Technologies and Applications (the technology transfer company of Ben Gurion University of the Negev), Johnson and Johnson Development Corporation and others. The company will distribute the product in the US through a joint NESS-Alfred Mann subsidiary.

NESS's core technology is based on the use of computerized "functional electrical stimulation" (FES). This can be used to activate paralyzed muscles and to restore partial movement. FES works by creating electrical pulses that are carried by small nerve fibers to the muscles, and cause the muscles to contract and release. This helps

to relieve the effects of paralysis and facilitates the development of pathways for voluntary control

After 13 years of research and development that cost \$25m. NESS, an acronym for Neuromuscular Electrical Stimulation Systems (NESS) Ltd. is well on its way to commercialize its flagship product "The Handmaster".

The Handmaster, is a non-invasive system for paralyzed hands. It incorporates and integrates advanced upper limb rehabilitation technologies in a single system for patients' independent use. FES or Functional Electrical Stimulation is a rehabilitation technology using electric current impulses applied to the neuromuscular system that activate the muscles and negotiate movement, increases local blood flow while lessening spasticity.

It is the first in a line of a planned range of products whose aim is to provide comprehensive treatment of the paralyzed hand and eventually other parts of the body.

The Handmaster consists of a size-adjustable splint that incorporates an integral electrode system and is connected by a cable to a small and user-friendly electronic control unit. The splint is easily applied and removed by the user and is designed for independent use at home.

The underlying technology was developed by Professor Roger Nathan of Ben-Gurion University who continues to guide the research and development program of the company.

TopSpin signs distribution agreement
Topspin Medical Inc. (TASE:TOPMD) announced yesterday that it signed a distribution agreement with Top Medical BV for the company's imaging catheter for diagnosing problems in cardiac arteries in the Benelux countries. Top Medical distributes cardiology devices.

TopSpin said that the Netherlands and Belgium were an important market for the company's products, because of

the number of opinion-setting cardiologists there and because the countries are known for generously supporting innovative medical devices. TopSpin also conducts clinical trials in both countries.

Xerox to Acquire XMPie for \$54m.

Copier maker Xerox Corp said it agreed to acquire marketing software developer XMPie for \$54 million in cash. This marks Xerox's first acquisition in Israel. Xerox is buying the company after four years of collaboration.

XMPie produces variable information software, which combines communications outlets including direct mail, the Internet and e-mail to create marketing materials that can be specialized enough to bear an individual's name.

XMPie will maintain its brand name and operate as a stand alone unit. XMPie founder Jacob Aizikowitz will head the unit. The "vast majority" of the company's 60 staffers will remain, as will its headquarters in New York and its development facility in Israel.

Based in New York, XMPie was founded in 2000. The company's solution is mainly designed for digital printing, which has received an immense boost in recent years thanks to developments in software. XMPie's software is mostly relevant for marketing activity, making it possible to prepare documents with the addressee's name embossed. The printed advertising market in the US will triple to \$16.6 billion by 2009. Xerox plans for XMPie to function as its first R&D center in Israel, focusing on digital printing. XMPie will operate as an independent unit. XMPie's 2006 sales are projected at \$15 million, and it expects to be profitable.

HU 12th , TAU 21st in biotech patent engineering

The Milken Institute ranks the Hebrew

University of Jerusalem 12th and Tel Aviv University 21st in its survey of biotechnology patent rankings for universities. The survey, entitled "Mind to Market: A Global Analysis of University Biotechnology Transfer and Commercialization," encompassed 100 universities and assessed them by the number of patents published, level of innovation and the interest they generated in industry.

US universities took the top five places. The University of Texas was in first place, followed by the University of California San Francisco, John Hopkins University, Stanford University, and Cornell University. The University of London came 10th followed by Harvard University and then the Hebrew University.

The Hebrew University is the second non-US university on the list while Tel Aviv University is the fifth.

InRob's novel system for unmanned ground vehicles

InRob Ltd. ("InRob") (OTCBB:IRBL), a leader in the development and production of advanced wireless control systems and integrated solutions for unmanned ground vehicles (UGV), announced that it has developed an intelligent railroad crossing safety system to improve safety of railroad crossings, following InRob's expansion into the remote-control consumer market.

The presence of grade railroad crossings has always been a potential safety hazard to motorists and pedestrians. In the U.S., almost 90% of all rail-related fatalities are connected with railroad crossing and trespassing incidents, according to the Federal Railroad Administration (FRA). In Israel, concerns regarding crossing safety have heightened in the wake of two fatal railway accidents in the past 12 months.

InRob is now offering its intelligent railroad crossing safety system to

Israel Railways to improve safety of railroad crossings, based on technological capabilities proven in military applications. The main components of the railroad crossing solution include advance detection devices and sensors, a sophisticated remote-control system and digital data link communication networks that relay information between crossings, trains and railway traffic control centers in real time. When an obstruction is detected on the tracks under specific conditions, the system assumes remote control of the train's braking system.

Chevron to implement On Track Innovations system in Cameroon
Chevron Corporation (NYSE: CVX), one of the biggest energy companies in the world, has chosen the EasyFuel solution made by Israeli company On Track Innovations (NASDAQ: OTIV). EasyFuel is an automated system for gasoline payment and automated fuel management.

Chevron will first be installing the systems in Cameroon, OTI said. It expects to expand use to additional African and also Asian countries as well.

The deal is estimated to be valued at about \$1.5 million to OTI.

EasyFuel is a wireless system that brings fleet managers access to real-time information, to prevent fraud and streamline operations.

OTI, a specialist in contactless micro-processor-based smart card solutions, is traded at a market capitalization of \$113 million, having lost 44% of its value this year.

The OTI solutions are easily integrated into existing hardware and software systems, the company says, adding that its system allows for 24-hour non-attendant sales.

Ormat to invest up to \$63.5m in biodiesel

Ormat Industries (TASE: ORMT) is entering the biodiesel field with the announcement that it will invest \$13.5 million in R&D and \$35-50 million in

the construction of a production facility. This will bring the company's total investment in this field to nearly \$60 million.

Biodiesel can be used as a substitute for conventional diesel fuel. Ormat aims to play an integrative role in this field, and will also focus on the development of plants for the production of alkyl esters used in the processing of biodiesel, as well as the development of production processes and the construction and operation of production facilities.

Ormat said its investment in R&D would probably be spread over the next five years, while the investment in the construction of the first commercial biodiesel production facility would be spread over the next two to three years. The company's entry into the field is based on the R&D it conducted in cooperation with an academic institute, which will grant the company an exclusive user license.

Ormat aims to develop a higher quality of biodiesel than that currently available on the market, and which will not have to be mixed with conventional fuels before it can be used in ordinary combustion engines.

Pfizer in licensing agreement With Quark Biotech

Pfizer Inc and Quark Biotech, Inc., announced that they have entered into an agreement under which Pfizer acquires an exclusive worldwide license to Quark's novel human gene RTP-801 and to molecules that modify its expression or function. RTP-801 is involved in the development of pathologic blood vessels, which accelerate the progression of age-related macular degeneration (AMD).

Financial terms of the agreement were not announced. AMD is the leading cause of blindness in the developed world affecting about 15 million Americans over the age of 50. The target for RTP-801 is neovascular or wet AMD. Wet AMD is the most devastating form

of the disease and occurs due to the formation of an abnormal vascular network beneath the retina of the eye. These blood vessels are excessively leaky and lead to an accumulation of fluid and blood beneath and within the retina resulting in a loss of visual acuity.

“Despite advances in research and the availability of new treatment options, there remains a need for new approaches to improve the lives of patients with AMD,” said Martin Mackay, Ph.D., Pfizer senior vice president Worldwide Research and Technology. “We are excited about the potential of RTP-801 to preserve vision in patients with wet AMD who have an increased risk of progressive eye damage and vision loss.”

Based on pre-clinical models, it is believed that AMD can be treated by blocking the expression of the RTP-801 gene through RNA interference or RNAi. RNAi is a naturally occurring mechanism within cells for selectively silencing and regulating specific genes. The ability to silence genes through RNAi could provide a new way to treat a wide range of human diseases -- including AMD -- that are caused by the inappropriate activity of specific genes.

Microsoft buys Israeli startup Gteko for \$110m.

Microsoft announced an agreement to acquire the Ra'anana, Israel-based startup Gteko Ltd. Microsoft will pay USD 110 million for the acquisition of the Israeli company.

Gteko, founded in Israel in 1992, is headquartered in Ra'anana, with offices in New York and Tokyo. Their most recent round of funding included investments from Pitango and Intel Capital, among others. Gteko manufactures ease-of-use networking and support software for the digital home.

“Our companies have many com-

plementary strengths and a closely aligned vision for delivering leading PC problem-solving solutions to customers directly and with our partners,” said Dr. Joshua Glazer, chief executive officer of Gteko. “Together, Microsoft and Gteko have exceptionally deep technology expertise to offer this market,” He added

Israel – Microsoft development center
The acquisition of Gteko is part of Microsoft’s strategic decision to turn Microsoft Israel into a research and development center for the international firm. Moshe Lichtman, one of the company’s senior executives, will oversee the R&D operations in the country.

“By the end of the decade, Microsoft will significantly expand its operations in the consumer sector, to which end advanced support solutions are required. Gteko’s leadership in providing simple solutions to a wide range of PC problems made this a particularly attractive opportunity for Microsoft,” said Lichtman, president of MS Israel R&D Center.

“Joining forces with Gteko is yet another building block in the expansion of our technological operations in Israel and it will help enhance our efforts to work together with other elements in the industry to help provide a superior PC experience for our customers,” he stated.

DSM invests in Israeli personal care company

DSM Venturing, the corporate venturing unit of Netherlands-based ingredients specialist DSM, says it has invested \$2m in Sol-Gel Technologies, a privately owned company specializing in beauty and health care applications.

The investment will be specifically channeled into the development of skin care and dermatology applications as

part of efforts by DSM to increase its presence in the personal care field.

Sol-Gel develops high technology ingredients that are used in sunscreens, anti-acne and anti-ageing products based on proprietary technology.

This patented technology revolves around its sol-gel line, which enables room temperature entrapment of organic and bioactive molecules in silica glass beads.

This is said to enable an efficient delivery system, whereby ingredients can be safely isolated and controlled – a valuable characteristic for the many increasingly functional cosmetic products that are now cramming retail shelves.

DSM says that as well as the investment in Sol-Gel Technologies, which has offices in the US, in addition to Israel base, it intends to explore possible joint development activities and other collaborations in other areas of personal care as well as the animal and human nutrition fields.

DSM has carved its name out in the pharma and nutra field, where it has established niches in food and beverage, dietary supplements as well as animal feed.

Its move into the personal care and cosmetic field has been more recent, but it is now establishing a reputation in this area for ingredients and building blocks used in UV absorbents, hair-sprays, soaps, creams, shampoos.

Those ingredients include vitamins, carotenoids, emulsifiers, polyunsaturated acids, citrates and a range of other fine chemicals.

In February of this year DSM launched Parsol TX, a new microfine Titanium Dioxide UV filter, and the latest to be added to the company's Parsol UV filter line.

It addresses growing demands for high caliber filters as well as tackling the problem of formulation compatibility often experienced with complex active ingredients.

New perimeter security systems Magal Security Systems, Ltd. (NASDAQ GM: MAGS; TASE: MAGS), announced that it has released two new upgraded advanced technology perimeter security systems. First commercial shipments of both systems are expected before the end of the year.

OmniTrax is the fifth generation of buried cable detection sensor from SSC, cementing its position as world leader in covert buried cable technology. Major new features of this product include a ranging function that locates targets with an accuracy of one meter, user defined detection zone assignment, sensor cables doubled in length allowing one processor to detect intruders over as much as 800 meters (1/2 mile) of perimeter, and fully integrated power and data distribution over the sensor cables.

XField is the third generation of electrostatic field sensor taking advantage of new digital signal processing technology, a direct to digital design and years of performance experience with previous generations. This completely re-engineered product continues to provide the tall and narrow volumetric detection field that is required by the Nuclear Regulatory Commission of man

Inkjet design could print at 1,000 pages per minute

Inkjet printers could put out 1,000 pages per minute, thanks to a full-page print technique described by researchers.

The JeTrix technique could print books to order at bookshops at the rate of two a minute, or at airport kiosks eliminating the need for book stocks,

and could be in use within two years, according to Moshe Einat, at the University of Judea and Samaria, in Ariel, West Bank. Instead of a moving print head, it uses a print “screen” the size of a piece of paper or larger, covered with tiny nozzles that can print sheets “almost instantly”, said Einat, of the university’s department of electrical and electronics engineering.

Einat and his colleague Nissim Einat have created a small prototype, 12cm square, which has already hit speeds of 1,000 pages per minute.

The Israeli Government and private “angel” investors funded the prototype, made up of 57,600 nozzles fed by micro-reservoirs 1mm square, but with more funding, Einat plans to make a whole-page version.

The researchers use micro-reservoirs, each of which feeds four nozzles by capillary action, and which are fed by an ink wiper, which fills them up.

The research, prototypes and patent applications have cost \$140,000, partly funded by the Israeli ministry of industry, said Einat. “We are now in a fund rising stage,” he went on. “Assuming we manage to raise the funds, the estimated time [a year and half to commercial products] is applicable.” The 1000ppm speed would be reached from the very first commercial models, he said.

SuperCom secures \$50m. contract

SuperCom (OTCBB: SPCBF.OB; Euronext: SUP), which provides smart-ID and active radio-frequency tracking solutions has signed an agreement worth about \$50 million to supply an ID cards system to an unnamed, European country.

SuperCom revenues in the first half of 2006 amounted to just \$4.9 million, and that was an increase of 25% against the same period of 2005.

The 10-year project is commencing in

this month, says SuperCom. It will be implementing an end-to-end national ID issuing and control system based on its Magna system.

The deal includes the supply of digital enrollment and production equipment, software, maintenance and supply of secured raw material for the production of various National ID cards.

Eyal Tuchman, SuperCom’s CEO said, “We anticipate this important contract will increase SuperCom’s backlog and revenues for the next ten years and will further strengthen SuperCom’s comprehensive Magna solution as a technology leader for national ID projects.

Recently SuperCom announced several additional agreements to supply its Magna system for the production, management and personalization of biometric passports in Asia-Pacific, Europe and other regions.

For the first half of 2006, SuperCom reported to a loss of \$1.64 million or 9 cents per share.

Elbit Systems in border security contract

The consortium led by Boeing (NYSE: BA), which includes Elbit Systems Ltd. (Nasdaq: ESLT; TASE: ESLT), has won a \$2.1 billion contract to help the Department of Homeland Security beef up security along more than 7,500 miles of US borders with Mexico and Canada.

In May, Boeing announced that it was participating in the tender, and that it passed the initial screening stage. The company added that Elbit System was a member of the consortium, through its US subsidiary, Kollsman Inc.

ImClone, Sanofi lose patent case to Israeli institute

Pharmaceutical companies ImClone Systems (IMCL.NAS) and Sanofi-

Aventis (SASY) have lost a court case pertaining to a patent for the methodology that inhibits the growth of tumour cells. The ruling may result in the two companies paying royalties on the sale of their experimental cancer treatment drug, Erbitux, to an Israel-based research institute.

The Weizmann Institute of Science in Israel and its licensing arm, the Yeda Research and Development Company, had filed a suit in 2003 alleging that the concerned technology was developed by their researchers, whose name were not included in the list of inventors of the patent that was awarded in 2001.

Monday's ruling by Judge Naomi Reice Buchwald of the Federal District Court of New York is expected to entitle the researchers to royalties on the sale of Erbitux. The judge directed the US Patent and Trademark Office to replace the current seven names on the controversial patent with those of Professor Michael Sela, Dr Esther Aboud-Pirak and Dr Esther Hurwitz of the Israeli research institute. ImClone Systems said that it disagrees with the court ruling.

The secret about Nobel Prizes

Dan Shechtman remembers the day he was kicked out of a research group because of the theory that last week won him the Nobel Prize in chemistry.

"Read this book. What you say is impossible," the group leader at the National Bureau of Standards in Maryland, where Shechtman was doing his sabbatical in 1982, told him.

"I told him, 'I know this book, and I know I have something new,'" Shechtman replied.

The response, recalls Shechtman: "You are a disgrace and I want you to

leave my group."

Shechtman joined another group, but the paper he wrote was rejected and he was ridiculed by many colleagues.

"My friends were nice to me, but kind of in the way that you're nice to the retarded kid," Shechtman recalled with a wry smile at a news conference this week.

Nearly 30 years later, Shechtman received the Nobel Prize for his work in quasicrystals, also called Shechtmanite.

Shechtman is the 10th Israeli to win a Nobel Prize, part of a chain that stretches back to S.Y. Agnon, who won the prize for literature in 1966. Of the 840 Nobel Prizes ever awarded, some 20 percent have gone to Jews. Israel, with its population of 7.5 million, has won the same number of Nobels as India, which was founded a year before Israel and has a population of 1.15 billion.

"Israeli universities, like my university, the Technion, are excellent," Shechtman said of the Technion-Israel Institute of Technology in Haifa. "But there's also an Israeli spirit of free thinking. Sometimes it leads to chaos because everyone has his own idea about everything, but free thinking encourages successful scientists."

Since 2002, Israeli scientists have received six Nobels -- two in economics and four in chemistry.

Some say Jews are uniquely suited to the study of science.

"For thousands of years, Jews have been brought up to question and to try to bridge the gap between existing knowledge and the prevailing reality," Gidi Greenstein, the director of the

The

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Reut Institute think tank, told JTA. “You have the Torah and the Talmud, and then you have the reality, which keeps changing. The tension between what we know and what we experience is the secret of creativity.”

Others say there is something unique about the Israeli character.

“One of the things you need to do well in science and high tech is to think outside the box, and we as Israelis are not familiar with any boxes,” said Professor Dan Ben David, director of the Taub Center for Social Policy Studies in Israel. “We don’t understand lines, we don’t believe in lines and we always ask why when someone asks us to do something. That can be very aggravating, but it’s a great quality when it comes to doing research.”

Israelis also tend to be tenacious and obstinate. The saying “Right or wrong, but never in doubt,” could be a national slogan. Shechtman provides the perfect example: He was ridiculed for years but never gave up.

Intel to acquire Invision

Chip giant Intel aims to take Israel’s Invision onboard in bid to take on Microsoft’s; Invision investors expected to gain 20 times their original input

Israel becoming a wrestling arena for Intel and Microsoft? Intel is currently in the advanced stages of negotiations for the acquisition of the Israeli printed circuit board manufacturer Invision Biometrics for \$50 million, according to market estimates. Invision’s dozens of employees are expected to remain with Intel once the acquisition goes through.

Invision Biometrics, previously unexposed to the media, is a developer of 3D sensor PCBs which detect face and body movement and translate them

into on-screen game moves, similarly to Microsoft’s popular Kinect technology. The merger with Invision will enable Intel to respond to Kintec, which is based on a PCB developed by the Israeli company Primesense.

Companies survey for the third quarter of 2011

Business activity expanded in the third quarter of 2011, though there was marked moderation in the pace of growth.

The slowdown in the pace of growth of activity was centered on the manufacturing, business services, and transport and communications industries.

The moderation in the manufacturing sector was reflected primarily in exports, but expectations for the coming quarter show that the moderation in activity will include sales to the domestic market as well. The moderation was prominent primarily among small companies in the sector.

Companies expect that activity will continue to be restrained next quarter as well. For the first time since the second quarter of 2009, the leading index crossed the 0.5 line which reflects a high probability of another slowdown in activity.

The average of inflation expectations among companies which responded to the survey returned to within the range defined as price stability, and stood at 2.6 percent.

Reports from all the companies and businesses participating in the survey show that in the third quarter of 2011, business activity grew at a more moderate pace than in the second quarter. The weighted net balance of the business sector was positive, but more moderate. Based on responses to the survey, the moderation in third quarter activity was focused on manufacturing

exports and sales of services to abroad. Expectations for the next quarter indicate that the domestic component as well of the manufacturing and services industries will slow down. The leading index of the survey forecasts, for the first time since the second quarter of 2009, a slowdown in the pace of growth for the following quarter.

Activity in the manufacturing sector grew at a relatively moderate pace compared with the previous quarter, primarily due to a standstill in export sales. The survey data indicate that the moderation in the net balance of output compared with the second quarter was most pronounced among smaller firms, though expectations for the following quarter are for a slowdown in output for both large and small companies. The companies report that next quarter the slowdown in activity will be reflected in domestic demand and not just in foreign sales volume.

Activity in the commerce sector increased more moderately than in the previous quarter. Additionally, in the current quarter as well the number of workers in the sector did not increase. Companies expect that in the fourth quarter of 2011 there will be a further increase in sales.

Business services companies report a moderate increase in activity, after larger increases in previous quarters. The slowdown in increase in activity focused this quarter on sales of services in Israel, together with a continued slowdown in sales of services abroad which began in the beginning of the year. Expectations are for continued moderate activities next quarter.

The companies in the hotels industry reported a sharp decrease in activity in the third quarter compared with the high levels recorded in the corresponding quarter of 2010. This decline in activity reflects moderation in the growth of tourist volume from Israel as well as from abroad.

Transport and communications compa-

nies reported that in the third quarter activity did not increase, after rising in previous quarters. The restrained activity was reflected especially in sales of services to Israelis, and expectations indicate that the moderation in activity will continued next quarter.

Construction company reports show that in the third quarter volume of activity increased slightly, due to an increase in construction volume of buildings and infrastructure. The finding which continues to stand out in the survey figures is the significant increase in prices of output of the sector, even as, for the first time in quite a while, there was a slowdown in the pace of increase. There was also a marked increase in the severity of the financing difficulty constraint.

Inflation expectations for the coming twelve months returned to within the 1–3 percent per year price stability target range, and the average is currently 2.6 percent, compared with 3.1 percent in the previous quarter. The companies expect that the shekel-dollar exchange rate in twelve months' time will be NIS 3.80/\$, compared with NIS 3.60/\$ forecast in the previous survey. The average exchange rate for the d