

ISRAEL HIGH-TECH & INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES
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“Water, water everywhere but...”



A number of years ago, the scarcity of water in the arid Middle East, nearly caused a war. Lebanon attempted to divert the waters of the Yarmuk River, one of the tributaries flowing into the Jordan River.

The current cumulative deficit in Israel's renewable water resources amounts to approximately 2 billion cubic meters, an amount equal to the annual consumption of water of the State. The deficit has also led to the qualitative deterioration of potable aquifer water resources that have, in part, become either of brackish quality or otherwise become polluted.

For nearly sixty years, Israel has been trying to solve the country's water shortage problem and has relied on technology. As a result Israel has emerged as a global leader in developing water purification, irrigation and desalination.

Israel has built the world's largest desalination plant. Israel Desalination Enterprises, at full production of 320,000 cubic meters a day, is expected to supply 15% of the country's water needs. At \$0.68 a cubic meter the price compares favorably with international costs of water. The company employs reverse osmosis technology developed at the Weizmann Institute.

The agricultural market is fairly mature but still growing steadily. Kibbutz Netafim which invented drip irrigation in 1965 does about \$350m. in sales annually. Israeli companies active in drip irrigation have achieved about half of the estimated \$1.5b. global market .

Mekorot Water Company Ltd. is a Government-owned company and, as Israel's national water company, is responsible for managing the country's water resources, developing new sources and ensuring regular delivery of water to all localities for all purposes. Mekorot

is in charge of the wholesale supply of water to urban communities, industries and agricultural users. Mekorot produces and supplies about two-thirds of the total amount of water used in Israel. The remainder is provided through privately-owned facilities.

Technologies are being developed in the field as well as in the laboratory. Researchers at Ben Gurion University are looking at ways to use irrigation systems

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Quantifying the need for water

Purifying water

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Tooth used for releasing medicine

Optium to acquire Israeli optical chip developer

Audiodentinnovates hearing device

Zaka scooters fitted with cameras linked to hospital in real-time

“Israel has a stock of human capital that will keep supporting its comparative advantage.”

Protalix secures approval from the FDA to initiate a Phase III trial

to cultivate fish, edible and tropical in the desert. Some time ago IHTIR visited a shrimp cultivation farm, all for export. The company employed subterranean water which was pure and mixed it with less pure water to provide an ideal, nearly disease free environment. Caviar is also being harvested and is enjoying strong demand.

At the Technion Institute of Technology Professor Desoretz is looking for ways to develop unique ports to prevent agricultural spouts from clogging.

Two of Israel's technological incubators are dedicated to developing a variety of water technologies. Magsens Ltd. in real time can monitor water passing through water pipes. Using magnetic fields, coupled with conductors it can check for varied chemical substances that may be dissolved in the water.

Veracon has developed a unique process for the rapid treatment of industrial effluents containing heavy metals. In factories it can reduce the amount of industrial heavy metals such as cadmium, copper and nickel flowing into our environment.

Israel will continue to experience a water shortfall but an ever greater percentage of water will be produced by technology.

Quantifying the need for water

By 2017 Israel must produce 200m cu.m. water a year "Israel must produce another 200 million cubic meters of desalinated water at \$0.60 per cubic meter within ten years," says Water Commissioner Uri Shani. He made the comment during a "Globes"-sponsored conference on water resources held at the Ruppin Academic Center, Tel-Aviv.

Shani said that the added desalinated water would improve the country's water balance and water quality, which was already suffering salinity. He added that NIS 500 million should be invested in purifying water for agricultural use.

He added that the condition of Israel's aquifers was poor in both water quality and quantity. All the aquifers were below their upper red lines, which meant that there are no reserves. The water quality in the Jordan basin is already too saline, as are parts of the coastal aquifer because of over-pumping.

Shani predicts that the desalination facility will never be built, which means that the Ashdod facility will have to be expanded from the currently planned production of 45 million cubic meters a year to 100 million cubic meters. He said the cabinet should decide on this as soon as possible.

The government has already decided on the production of 500 million cubic meters of desalinated water a year, but later cut back to 350 million cubic meters. So far, only the 100 million cubic meter facility at Ashkelon has come on line, and the smaller Palmachim facility is under construction. Construction of the Hadera facility has not yet started. The government decided that Mekorot National Water Company would build the Ashdod facility through a subsidiary. However, since this subsidiary has not yet been established, construction of the facility has been delayed.

Purifying water



AqWise, headquartered in Israel with offices in Mexico, provides advanced biological wastewater treatment technologies. AqWise's patented AGAR(R) (Attached Growth Airlift Reactor) technology increases capacity and nutrient removal in wastewater treatment

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plants, utilizing advanced bio film technology. The AGAR® process, is a fixed biofilm process, which can be implemented for expansion of existing Wastewater Treatment Plants for increased capacity and nitrogen removal, while using the same biological reactor. However, the company does not provide information on its patented process.

The company's first effective plant was completed for the Israeli town of Yavneh. It processes the total needs of that community.

It can be used for upgrading the biological process in existing plants or for application in new plants with limited space.

The company's solutions are successfully implemented worldwide in over 20 municipal and industrial plants, in various fields: pulp and paper, food and beverage, agricultural wastewater, chemical plants and aquaculture farms.

ALD to provide software for the Sukhoi Superjet 100



Advanced Logistics Development Ltd. (ALD) (TASE: ALD) has won a \$5 million tender to install safety and fault identification and prevention software for the Russian Sukhoi Superjet 100 regional airliner.

The Superjet 100 program is estimated at hundreds of millions of dollars. The plane will carry up to 100 passengers. 400 planes have already been sold, and 1,800 will reportedly be sold to European airlines. Deliveries are due to begin in 2008.

ALD's R&D center is in Tel Aviv, with sales offices in the US, UK, France and Italy. The company recently won a NASA project to analyze and prevent faults in the Space Shuttle.

The company is also participating in the F-35 Joint Strike Fighter program, headed by Lockheed Martin Co. (NYSE:LMT). Other customers include Boeing Co. (NYSE:BA), Airbus, Israel Aerospace Industries Ltd. (IAI), the IDF and Israel's nuclear center in Dimona.

Syneron Invests in new dental aesthetic technology

Syneron Medical Ltd. (NASDAQ: ELOS) announced that it has entered into an agreement with Fluorinex Active, an Israeli-based start-up to develop advanced fluoridation and tooth whitening devices for dentists and consumers.

Fluorinex has developed a unique device that delivers fluoride ions directly to the tooth enamel via a sophisticated electro-chemical technique. The Fluorinex technology delivers the maximum amount of fluoride ions to the tooth, for the longest period of time known today. However, unlike other electro-chemical based fluoride systems, no electric current passes through the patient's tissue, thus enhancing the safety of the device. Fluorinex has also begun development of a tooth whitening system based on the same principles and technology as its fluoride delivery system.

As part of the investment agreement, Syneron will have exclusive, worldwide distribution rights for 10 years for the tooth whitening devices and consumables.

Syneron CEO, David Schlachet, commented, "Fluorinex's team has proven their innovative and technological skill with the development of their fluoridation device. We view their success as directly applicable to the development of a more advanced tooth whitening device that, like the fluoride delivery, will make aesthetic tooth whitening treatments much more effective and longer lasting and will enable us to serve this growing aesthetic application.

IMF ups Israel growth forecast



The IMF has raised its growth outlook for Israel by 0.3 percentage points in a new World Economic Outlook report published recently.

The IMF previously predicted 4.5% growth. It now predicts 4.8% growth in 2007, and 4.2% growth in 2008. The

IMF's growth forecast for Israel is one of the highest for developed countries as the IMF categorizes Israel.

The IMF also predicts 0.1% deflation for Israel this year; the only developed country for which it predicts this. The IMF projects that Israeli inflation will only reach the government's inflation target midpoint of 2% in 2008. For the sake of comparisons the IMF average inflation rate for developed countries in 2007 is 1.8%.

The IMF predicts that Israel's unemployment rate will fall to 7.5% of the civilian labor force in 2007 and 7.2% in 2008, down from 9% in 2005 and 8.4% in 2006.

Israel's unemployment rate is still among the highest among developed countries; only Germany, France, Spain, Belgium, and Greece are projected to have higher rates.

Israeli firm signs multi-million dollar contract with CIITE

Israeli firm, Aladdin Knowledge Systems Ltd, has signed a multi-million dollar contract with the Consortium for Indian Information Technology Education (CIITE) to supply its eToken authentication solution to secure network of e-Learning resources on its campuses across India.



CIITE, a nodal agency at the national level focusing on IT education, chose Aladdin eSafe over other solutions following a lengthy testing and evaluation process.

The high capacity, gateway-based eSafe content security solution will be used by nearly 6,800 member institutions of CIITE, it said.

The company did not disclose the size of the contracts but market sources estimate the eToken deal at \$38-57 million.

Over the next three years, Aladdin will supply eToken to 3.8 million CIITE students accessing the consortium's educational portal. The eToken will secure access to online academic services, including online libraries, video-based learning, and IT-related texts.

The Israeli firm has also provided CIITE with an authentication course, an academic-level DVD training course detailing authentication and security.

Students in CIITE-supported institutes and high-level educational organizations will use this course.

The course was adopted to meet special CIITE requirements over the past year, it said.

Aladdin recently established its Indian subsidiary in Mumbai and has expansion plans.

SpeedBit's Incredible Shrinking Download



Downloading a movie or a TV episode over the Internet may become a reality in the near future. SpeedBit an Israeli startup called says it has devised a solution that can dramatically accelerate video downloading over the Net—even with a high-speed Net connection. A full-length movie clocking in at 1.5 gigabytes still takes hours to buy and download.

SpeedBit, based in Herzliya and Haifa, is about to present its novel video accelerator. Chief Technology Officer Idan Feigenbaum said, thatSpeedBit has managed to shrink the download time for a full-length feature to about 40 minutes over a 5 Megabit-per-second (Mbps) Internet connection. At the higher speeds available in some countries, that could be slashed to 20 minutes or less.

Reducing the time to download movies to around 15 minutes is expected to result in a big upsurge in penetration of this market.

That should also come as welcome news to big companies that have bet on Internet video. Retail giant Wal-Mart (WMT) launched its much-anticipated video download service in February, following the 2006 introduction of videos on Apple's (AAPL) iTunes. Amazon.com (AMZN) and Microsoft's (MSFT) MSN also now offer streaming or downloadable videos.

But Wal-Mart has reported that only 3,000 movies were downloaded in the first month of its service. And though Blockbuster (BBI) looks likely to introduce video downloads by the end of this year, it is already cautioning that the business probably won't take off for another year or two.

SpeedBit uses complex algorithms to optimize available bandwidth—in effect, downloading different chunks of a video simultaneously over multiple Internet connections, rather than in a single stream.

The technology behind the video accelerator was originally developed by SpeedBit to shorten software downloads. The company's Download Accelerator Plus (DAP) software program, introduced in 1999, has already amassed nearly 140 million users.

The company has been profitable nearly from its outset but will not reveal any further financial details.

Israel Desalination Enterprises plans IPO

Israel Desalination Enterprises (IDE) Technologies is planning an initial public offering.

IHTIR visited the company and reported on its visit in the April 2007 issue.

The company is owned in equal parts by The Israel Corporation, controlled by Idan Ofer, and Israel Chemicals (TASE: CHIM), which is a subsidiary of The Israel Corporation. Now that The Israel Corp management has granted its blessing to a public flotation, IDE has commenced negotiations with potential underwriters.

IDE specializes in thermal and membrane-based desalination technologies. It is expected to achieve a market cap of \$400-500 million, though at this stage, there are no peer companies for the sake of comparison. IDE is the only company in the world that focuses exclusively on desalination.

IDE netted \$9.2 million in 2006, up from \$5.3 million the year before.

It was founded in 1965 and since its establishment it has sold 360 desalination plants around the world, which produce 900,000 cubic meters of potable water a day.

During IHTIR's visit at IDE we heard from Chinese officials that they are planning the purchase of an IDE desalination plant

Northrop in small-satellite deal



Striving to differentiate itself from rivals, Northrop Grumman Corp. is taking the contrarian's step of forging an exclusive partnership with Israel Aerospace Industries Ltd. to propose lighter, more-flexible spy satellites to the

U.S. military and intelligence agencies.

The project, which was code-named "Trinidad" during development and which is expected to be announced at a space conference in Israel, reflects Northrop's drive to move beyond being primarily a supplier of subsystems for government space programs into the more influential and potentially more profitable role as a prime contractor.

Science Corner

Embryonic muscle

In the future, this finding may help in designing new methods for healing injured and diseased muscle tissue using stem cells. Muscle fibers are large cells that contain many nuclei. They begin, like all animal cells, as naïve embryonic cells. These cells differentiate, producing intermediate cells called myoblasts that are destined to become muscle. New myoblasts then seek out other myoblasts, and when they find each other, they stick together. In the final stage of muscle fiber development, the cell membranes of attached myoblasts open up and fuse together, forming one large, interconnected cell. How myoblasts identify other myoblasts and how they cling together had been established, but the way that the cell membranes fuse into one has remained a mystery. A study by Weizman Institute scientists has shed light on this mystery. Research student Rada Massarwa and lab technician Shari Carmon under the guidance of Dr. Eyal Schejter and Prof. Ben-Zion Shilo of the Institute's Molecular Genetics Department carried out the study, with help from Dr. Vera Shinder of the Electron Microscopy Unit. The cells' system for identifying other myoblasts and sticking to them consists of protein molecules that poke through the outer cell membrane – one end pointing out and the other extending into the body of the cell. These recognition proteins anchor the cells together, but what makes myoblasts open their doors to each other and merge into one cell? The scientists discovered that a protein called WIP, which attach to the internal part of the myoblast recognition protein, plays a key role in muscle cell fusion. WIP communicates between the recognition protein and the cell's internal skeleton, which is made of tough, elastic fibers composed of a protein called actin. The skeletal actin applies force to the abutting cell membranes, opening and enlarging holes that allow the cells to merge. The Weizman Institute team found that the WIP protein is activated by an external signal once myoblasts identify and attach to each other. Only when it receives this signal does WIP hook the actin fibers in the skeleton up to the myoblast recognition protein, allowing cell fusion to proceed. The WIP protein has been conserved evolutionarily. In other words, versions of it exist in all animals, from microorganisms such as yeast, through worms and flies, and up to humans. This means that the protein fulfills a function necessary for life but also, say the scientists, because of this conservation, studies conducted on this protein

in fruit flies can teach us quite a bit about how it works in humans. To further examine the role of WIP, the scientists knocked out the gene responsible for producing it in fruit flies. In flies that did not make the protein, normal muscle fibers were not produced. WIP-deficient myoblasts continued to identify and cozy up to one another, but fusion between cell membranes did not take place, and multi-nucleated muscle fibers failed to form. An article describing these findings appeared in the journal *Developmental Cell*. This study, which improves our understanding of the process of muscle formation, may assist in the future, in devising new and advanced methods for healing muscle. Specifically, these might include ways of fusing stem cells with injured or degenerated muscle fibers. Fusion between cell membranes plays a key role in development of different kinds of bone cells, placental cells and immune system cells, as well as in fertilization and in the penetration of viruses into living cells. Understanding how membrane fusion takes place may one day lead to the development of ways to encourage the process when it's needed or hinder it when it's likely to cause harm.

One Membrane, Many Frequencies

Modern hearing aids, though quite sophisticated, still do not faithfully reproduce sound as hearing people hear it. New findings at the Weitzman Institute of Science shed light on a crucial mechanism for discerning different sound frequencies and thus may have implications for the design of better hearing aids.

Research by Dr. Itay Rouso of the Weitzman Institute's Structural Biology Department, which recently appeared in the *Proceedings of the National Academy of Sciences (PNAS)*, suggests that a thin structure in the inner ear called the tectorial membrane responds to different frequencies. This membrane communicates between the outer hair cells – which amplify sound in the form of mechanical vibrations – and the inner hair cells – which convert these mechanical vibrations to electrical signals and pass them on to the brain via the auditory nerve. If certain genes for this membrane are missing or damaged, total deafness ensues.

Rouso and research student Rachel Gueta, together with researchers at the Ben-Gurion University of the Negev, wanted to explore the mechanical properties of the tectorial membrane. Using an atomic force microscope, which probes surfaces with a fine microscopic needle, they tested the resistance of

the gel-like membrane at various points to assess precisely how rigid or flexible it was. To their surprise, the scientists found that the level of rigidity varies significantly along the length of the membrane: One end of the membrane can be up to ten times more rigid than the other.

These differences occur in the part of the membrane that is in direct contact with the outer hair cells. Observation under a scanning electron microscope revealed that this variation is due to changes in the way the protein fibers are arranged: At one end, they form a flimsy, net-like structure that allows the membrane to be flexible; on the rigid side the fibers are densely and uniformly packed.

The more rigid a tectorial membrane is, the higher the frequency at which it can vibrate. Thus, the flexible end of the membrane, which should respond to low-frequency vibration, is found near the hair cells that transmit low frequencies, and the rigid end near hair cells that transmit high ones. This spatial separation, say the scientists, translates into the ability to distinguish between sounds of different frequencies.

The new understanding of the mechanics of hearing may assist in the development of better hearing aids. Rouso, meanwhile, plans to continue exploring how variations in membrane rigidity affect hearing. He intends to test tectorial membranes under different physiological conditions to further understand how we hear such a wide range of frequencies (the highest is a thousand times the lowest), as well as to shed light on the causes of certain hearing disorders..

Genes that slow cell division and prevent cancer

Cancer cells differ from normal cells, among other things, in the way they divide. When a normal cell complies with a signal telling it to divide, it also begins to activate a "braking system" that eventually stops cell division and returns the cell to a resting state. When that braking system is faulty, uncontrolled cell division and the growth of cancer can result. Weitzman Institute scientists studied this system of brakes, and identified a number of the genes involved.

According to the study's findings, which appeared recently in *Nature Genetics* online, aberrations in the activities of these genes are tied to certain types of cancer, as well as to the relative aggressiveness of the cancer. These insights may, in the future, lead to the

development of ways to restore the brakes on runaway cell division and halt the progression of cancer.

First, the scientists mapped the network of genes that is activated in normal cells upon receiving the order to divide. The “divide!” signal comes from outside the cell in the form of a chemical called a growth factor, and it initiates a chain of events inside the cell. The genes activated in this sequence produce proteins, some which cause cell division, and others that put the brakes on that division. To find which genes were responsible, the scientists needed to sift through a huge quantity of data on genes and their activities. To cope with this monumental task, a team of Weitzman Institute researchers from a diverse fields pooled their knowledge and experience:

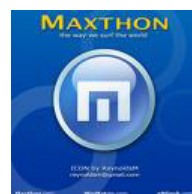
This collaboration between physicists, mathematicians, computer scientists, and biologists – the sort of multidisciplinary research for which the Weitzman Institute has gained a global reputation – yielded some startling results. They found that following the receipt of the growth factor signal, cell activity takes place in a number of separate waves in which genes are turned on and off for different periods of time. In the first wave, the activity of a few genes rises for about 20 to 40 minutes. These are the genes that cause the cell to divide. In contrast, the next four waves, ranging from 40 to 240 minutes after the signal, are comprised primarily of gene activity tied to the process of halting cell division.

The scientists then focused on identifying the genes in these later waves and confirming that they do, indeed, put the brakes on cell division. Through their wide-ranging study, they found 50 genes that interfere with the genetic activities of the first wave. This braking system works by producing proteins that directly attach to the cell-division genes, hindering their activity. Yet another protein they identified works, instead, by dismantling messenger RNA carrying instructions for making cell division proteins from the genes to the cell’s protein-production machinery.

In tests conducted on tissues from ovarian cancer patients, the scientists found a correlation between levels of activity in the “braking” genes, rates of survival, and the aggressiveness of the disease. These findings point the way toward the development of a personal genetic profile that might pinpoint the genetic defects responsible for each cancer and help doctors tailor a

treatment fitted to each patient. Such a genetic profile can also help predict the individual progression of the disease. In the future, the identification of the exact factors causing uncontrolled cell division in different cancers might lead to the development of effective treatments for preventing or halting cancer growth.

Google buys stake in Israeli start-up Maxthon



“TechCrunch”: The \$1 million investment is part of a much larger strategic deal.

Technology blog “TechCrunch” reports that Google Inc. (Nasdaq: GOOG) has acquired a minority stake in the Israeli-Chinese start-up Maxthon International Ltd., the

developer of the Maxthon Browser, for \$1 million, and that the investment is part of a “much larger strategic deal” between the two companies.

“TechCrunch” said, “The deal was apparently done at least two months ago, but the companies have delayed releasing the news.

The Maxthon Browser was developed by the Chinese, specifically for that market. “TechCrunch” says, “At the very least we expect the strategic deal to involve replacing the default search option in the browser from the Baidu search engine in China and Yahoo in other countries with Google search.

The deal may also go beyond search and involve integration with other Google services directly into the browser. Maxthon would then be promoted on Google as a preferred browser. Maxthon has had over 80 million downloads of its browser, and over half of its users are in China. Maxthon-originated searches may account for up to 25% of total Baidu traffic, according to one source.”

Maxthon has raised \$6 million to date. Seed financing came from Morten Lund and WI Harper in March 2005, and CRV invested around \$5 million in the company in March 2006.

IVA conference to focus on building large companies

The Israel Venture Association (IVA) announced that its annual High-Tech and Venture Capital Conference



will be held on June 10 - 11, 2007 at the David Intercontinental Hotel in Tel Aviv. IVA announced that it has partnered with the Red Herring business and technology magazine to co-manage the Conference panels and the "Start-up of the Year" competition.

Conference speakers will include prominent industry leaders from Israel, the US, Europe and Asia. Many international investors from around the world are expected to attend.

"In just over a decade, the Israeli technology industry has established itself as a global hub of innovation, with extraordinary entrepreneurial spirit and significant investor interest from all over the world," said Conference Co-Chairmen Eddy Shalev, General Partner and Founder of Genesis Partners, and Eli Barkat, General Partner and Founder of BRM Capital, "We expect that the industry experience that was developed during this period will drive an acceleration in both the quantity of successful start-ups and, even more importantly, the quality and magnitude of the successes."

The theme for this year's event is "Start Up Big!" and it will focus on Building Large Companies with a stimulating program that includes how to better leverage Israeli innovations to create larger companies, what this means to Israeli entrepreneurs/VC's and LPs, local and global case studies, which sectors to invest in, CleanTech and other emerging sectors with the potential to impact the industry. In addition, the Conference will include focused breakout sessions on Networking and Home Networking, Web 2.0 & 3.0, new models for Enterprise Software, Medical Devices and Biotech as well as Gaming and Digital Media.

As a Conference highlight, Red Herring Magazine has partnered with the IVA in organizing the "Start-up of the Year" contest. The competition will honor the best start-ups of 2007 in the categories of Software & Internet, Semiconductor & Communications, and Life Sciences. In addition, a special IVA committee will elect the IVA Persons of the Year in the following categories: the most significant contribution to the Israeli high-tech and venture capital industry, the leading technology entrepreneur, and the venture capitalist who has prominently contributed to the community. Representatives of the IVA and Red Herring will present the awards to the winning start-ups in each category of the start-up competition and the IVA Person of the Year awards.

According to Dr. Orna Berry, Chairperson of the IVA, "We are observing a trend in the Israeli entrepreneurial landscape where more and more entrepreneurs are focused on building global category leaders right from the get go. Building large companies is a national challenge, which will change the face of Israel's economy and advance the Israeli edge in global competition."

Israeli Air Force selects Orsus Situator for continued deployment in its bases



Orsus, a pioneer in the field of Situation Management, a new holistic approach to optimizing situation planning, response

and analysis, has received an order for the deployment of its Situator product suite in new additional bases for the Israeli Air Force.

This project marks the second order for Orsus with the Israeli Air Force, which first deployed Orsus' Situator solution at numerous bases over a year ago. Situator's open architecture enables the Israeli Air Force to manage the workflow between control room operators, field personnel and officers in both routine and emergency situations. In addition, Situator converges more than a dozen different and disparate security systems, such as sensors, video analytics, surveillance systems, alarm panels and GPS enabled vehicles, into a single view with the ability to operate these systems in a uniform manner.

"Implementing Situator from Orsus has greatly improved how the Israeli Air Force manages and monitors its ground security operations," said Gilad Chitayat, Director of Sales at Orsus, who has been involved with the Israeli Air Force project since its inception. "Thanks to Situator, the Israeli Air Force control rooms today are entirely paperless and the chances for human error have decreased due to the automated operational procedures mechanism."

In the previous installations, Situator reduced training time for control room operators by 50 percent and decreased the operational costs of activities related to guards and patrols. With Situator's advanced training, simulation and debriefing tools, the Israeli Air Force now has the ability to conduct complex drills in an efficient manner while continuously improving its level of preparedness.

“Orsus is honored that Situator has been chosen for the second time around by the Israeli Air Force,” said Rafi Bhonker, VP of Marketing and Sales at Orsus. “The Israeli Air Force follows the highest technology and security standards in the world and its use of Situator is a testament of the reliability of our situation management solution.”

Record NIS 13.9b raised on TASE in first quarter of 2007



A record NIS 13.9 billion was raised on the Tel Aviv Stock Exchange (TASE) during the first quarter of 2007, Tamir Fishman & Co. says in its quarterly summary.

53 offerings of stocks and bonds were made during the quarter, compared with 24 during the corresponding quarter of 2006, and almost half of the 118 offerings during 2006 as a whole. The amount raised was nearly seven times more than the amount raised during the corresponding quarter, and 87% of the amount raised in 2006 as a whole.

The largest IPO during the first quarter was the NIS 6.43 billion raised by Oil Refineries Ltd. (TASE:ORL). The smallest offering was the NIS 6.8 million raised by Binyan Mortgage Bank Ltd. (TASE:BNIN)

Seven biomedical companies held IPOs during the quarter. Real estate companies raised NIS 2.82 billion in 20 offerings, a fifth of the total amount raised during the quarter.

Poalim IBI Underwriting and Investments Ltd. (TASE:PIU) managed thirteen offerings during the quarter and participated in five more, the most of all underwriters. Gaon Underwriting and Investment Ltd. made the highest average yield on offerings at 18%, and Discount Underwriting and Issuing Ltd. had the worst average yield on offerings at minus 14.6%.

Tooth used for releasing medicine

IntelliDrug project is supported by the European Commission 6th Framework Program (Information Society Technologies). Aimed at developing an electronically controlled, intraoral drug delivery system with remote control and replaceable reservoir it provides alternative approach for the treatment of addiction and chronic diseases.



The micro-system comprises a medication reservoir and release mechanism, a built-in intelligence, micro-sensors and micro-actuators. IntelliDrug device will be placed in the oral cavity. The medicine is contained in the small reservoir.

It will be released in a controlled manner accordingly to patient's needs, for periods lasting days, weeks or months. The device will be reloaded in a simple non-invasive way. The released medicine will be either absorbed by the oral mucosa or swallowed by the patient.

IntelliDrug device automatic activity overcomes the problem generated when patient forget to take the medication. Moreover it is easily adjusted to personal needs like: weight, age, sex, treatment characteristics, way of living etc. It can significantly improve quality of life in terms of stability, safety, convenience, freedom, discretion, lack of pain and less side effects.

IntelliDrug is placed in oral cavity: which means that it is highly accessible and can be easily removed.

The Israeli firm's device can transmit heart data directly to doctors

Local scientists have developed a portable electrocardiograph machine that can transmit highly detailed data on heart activity to physicians by mobile phone.

The CardioSen'C is considered an advance in portable heart-monitoring devices because it uses many more electrodes to measure heart activity and is equipped to communicate the results instantaneously to a cardiologist.

SHL, the Israeli company behind the CardioSen'C, says its machine can dramatically reduce deaths from heart attacks through early diagnosis of patients who might otherwise hesitate before calling a doctor.

Patients using CardioSen'C attach 12 electrodes to their chest and upper body and strap the battery-powered unit on the front of their chest. Automatic digital transmission allows the electrocardiograph results to be transmitted at the highest quality available and at a high speed to the patient's cardiologist for instant diagnosis.

The machine is so small that readings can be taken

anywhere, even while traveling. The unit is automatically connected via digital cell phone to a dedicated medical control center.

Erez Alroy, co-chief executive officer of SHL, which specializes in telemedicine technology, said patients who don't feel well could use the machine to measure their heart activity and consult instantaneously with physicians reading the data in real time.

"When people don't feel well, it can take time to make the decision to go to a physician or a clinic. Maybe they put it off until the next day. This is a crucial time, when there can be irreversible damage to the heart," said Alroy.

"We have customers who are transmitting their ECG from any part of the world you can imagine," said Alroy. "Most people hesitate before going to a local doctor abroad. They are worried about problems with the language, about the lack of medical history. We find that people prefer to call ... back home, where they can speak their own language and then take instructions. People on holiday find it a very useful tool."

Alroy said the unit would make taking an ECG no more trouble than taking your temperature. "We believe in the future more and more people will have various medical measuring devices at home," he said.

SHL plans to market the CardioSen'C first in Israel, where the company already has more than 70,000 cardiac patient subscribers, and then in Europe. The company plans to market the unit later in the United States, where it is expected to cost several hundred dollars.

The company's first ECG machine developed for patient use has already been approved for use in the United States. Its CardioBeeper 12/12 is a handheld ECG transmitter capable of sending a full ECG reading to the monitor center in 12 seconds via a standard phone line.

Mobile ECG machines that transmit data by phone to physicians are already available in the United States, but SHL said the CardioSen'C has several advantages over the existing services.

Optium to acquire Israeli optical chip developer

Optical subsystems specialist Optium Corporation is to acquire Israeli developer of 40Gbit/s transmission devices Kailight Photonics in a deal valued at up to \$40 million.

The deal includes a \$35 million up-front payment in



cash.

Venture capital investors in Kailight (Nes Ziona, Israel) include Lucent Venture Partners, Hyperion Venture Partners, Ofer Brothers High-Tech Group and Yozma Venture Capital. The company was founded in 2001 and is believed to have raised about \$12 million in venture founding.

The acquired business is expected to contribute to earnings early in calendar year 2008 according to Optium, and to close within the next 45 days, subject to customary closing conditions and regulatory approvals.

Moody's: Israeli economy in prolonged upturn

Moody's Investors Service says in its annual report on Israel that the country's investment-grade ratings and positive outlook reflect the country's improved economic dynamism and unusual resilience despite war and ongoing regional tensions. Moody's rates Israel's foreign currency country ceiling for bonds as Aa1, based on the foreign currency government bond rating of A2, and its assessment of a very low risk of a payments moratorium in the event of a government bond default.

Moody's Vice President Kristin Lindow said, "The Israeli economy is in the midst of a prolonged upturn that was only briefly affected by last year's war with Hizbullah, the militant Islamic movement based in Lebanon. Growth has averaged 5% for the last three years, yet the current account surplus actually widened further each year and inflation was nonexistent in 2006."

Israel's fiscal deficit narrowed and the government's very high debt burden shrunk by 9 percentage points as a share of GDP. "Capital market, fiscal, and labor market reforms along with the restructuring of some key monopolies have been an important boost to growth by transforming Israel into a more modern, competitive, and market-oriented economy. Israel has a clear comparative advantage in knowledge-based information-technology products and services, and has attracted large-scale foreign direct investments both in the midst of the conflict and after."

Although Lindow cautioned that the economy's

performance would likely be vulnerable in the event of a prolonged or severe deterioration in the security situation, she emphasized that its newly entrenched dynamism suggests that its resilience has been greatly strengthened in recent years.

Audiodent innovates hearing device

Audiodent is a privately owned medical device company, devoted to the development, manufacturing and marketing of invisible wireless hearing devices.



Audiodent is developing a line of hearing-aid systems that is based

on the physiological principle of sound conduction through the skull bone and utilizing the teeth as the path to the skull bone. The hearing-aid device placed on the tooth and will use bone conduction to deliver audio directly to the nerves, solving the discomfort, performance and stigma issues with current generation of products on one hand and the need for medical surgery on the other hand.

The World Health Organization estimates that over 120 million people worldwide have a disabling degree of hearing impairment. However, only about 10% of them are satisfied hearing aids users. In spite of introduction of new technologies to the hearing aids market, over 80% of the hearing impaired people avoid hearing aids due to poor sound quality, stigma and discomfort. 40% of those who did purchase a hearing aid are dissatisfied; 12% of the hearing aids owners do not use them at all.

Over 6.2 million hearing aids were sold in 2004 at a wholesale value of about \$2.5bn. The market is ranked 5th in growth rate within the medical device industry, with 13% CAGR (Frost & Sullivan, 2005).

Audiodent's hearing systems use multidisciplinary technologies including microelectronics, RF, DSP software and mechanical engineering.

Audiodent developed and tested several prototype systems that validate the technology and concept. Patients tested prototypes with all types and degrees of hearing impairment. and demonstrated exceptional performances, which were defined by, market experts as a "revolution in audiology."

Zaka scooters fitted with cameras linked to hospital in real-time



ZAKA the orthodox rescue and identification organization fitted five motor scooters with devices that transmit pictures of accident

scenes and information about victims to Hadassah Medical Center-Ein Kerem. The real-time service allows medical teams to prepare for patients being sent to the emergency room, and to immediately advise staff in the field.

The broadcast system, produced by the Jerusalem-based company Servision, uses an ultramodern \$2,500 camera installed on a special post on the scooter. When ZAKA volunteers arrive at a scene, they use the camera to transmit pictures via their cellphones to a computer in the hospital's trauma unit. Medical teams see accident victims on the screen long before they arrive. The pilot project will determine the feasibility of installing these units on other ZAKA vehicles in the future.

Israeli-developed helmet developed to protect American airforce

The Israeli-company Elbit's new helmet is set to be included in the development of the latest fighter jet, the F-35, reports Ma'ariv. Developed by the US Army and NATO, the new F-35 is expected to play a major role in American and global military operations. The new helmet is an advanced model of a design originally developed for Israel's Lavi planes from the 1980s. On the visor of the helmet it will be possible to display all the flight and system data. Thus the pilot will be able to continue to look straight at a target or enemy instead of being diverted at any of the various screens. The helmet's technology allows the combat pilot to aim anywhere he directs his view.

"Israel has a stock of human capital that will keep supporting its comparative advantage."

In a report released by Morgan Stanley's, Serhan Cevik, Vice President for Middle East and North Africa, Israel's economy received a glowing

review. Cevik states in the report that: "With such an extraordinary link to the global investment cycle, Israel has benefited from strong growth all around the world in the last couple of years . . . (and) growth dynamics have become more balanced and therefore resilient to cyclical changes in the global economy" and that "our optimism . . . will not disappear just because of market jitters." Cevik remarks that, "the composition of human capital and economic sectors is a major source of productivity growth." According to the Morgan Stanley report, one of the major factors in Israel's economic outlook is the structural changes within the economy: "The economy's shift to higher value-added technology-intensive sectors" results in "the positive feedback loop – from technological orientation of human capital and economic activity to total factor productivity and income growth – enhances the economy's growth potential."

Candela buys Impase for \$16.5m.

FDA certified and with the CE Mark of approval, Inolase's technology entered the sales market in October 2006

Candela, a U.S. company that manufactures and markets laser technology for aesthetic and cosmetic procedures acquired laser start-up Inolase. Inolase has developed a vacuum-driven Pneumatic Skin Flattening technology which reduces the pain associated with laser and light-based skin treatments, such as hair removal and treating skin discoloratio

Protalix secures approval from the FDA to initiate a Phase III trial

Protalix BioTherapeutics, Inc. (Amex: PLX) announced that it has received written notice from the United States Food and Drug Administration (FDA) that it may initiate a Phase III clinical trial in the United States of its lead product candidate, prGCD, a proprietary plant cell expressed recombinant form of human Glucocerebrosidase (GCD), for the treatment of Gaucher Disease, a lysosomal storage disorder in humans.

The FDA has allowed the Company to directly initiate Phase III based upon the results of the Company's pre clinical and Phase I clinical trials of prGCD. The Company presented the completed data from its Phase I clinical trial at the European Working

Group of Gaucher Disease (WEGGD) in Cambridge, United Kingdom in July 2006. The company hopes to commence the Phase III clinical trial shortly. The trial will take place in centers in the United States, Israel, where approval from the Israeli Ministry of Health has been received, and other locations worldwide. The study will initially consist of male and female adult patients with Gaucher Disease.

Competition aiming to help bring clean, safe water

Students from the Technion, Israel's esteemed institute of technology, developed a device called WatAir, which collects dew from the air and transforms it into 48 liters of fresh water per day, providing a continuous source of water in nearly any climate. Jo da Silva, one of the judges called WatAir: "A wonderfully simple concept which draws its inspiration from nature."

Arup, a global engineering, design, planning and consulting firm with almost 9000 staff in more than 34 countries launched the Arup Cause, an international competition to find innovative solutions to supply clean, safe water and sanitation to millions of people around the world.



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