ISRAEL HIGH-TECH
& INVESTMENT REPORT

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Ninth Most Innovative Country

According to an updated ranking of an Economist Intelligence Unit report called "the world's most innovative countries," Israel was rated the ninth most innovative country globally in 2008, and is forecast to rise further to win the eighth position sometime between 2009 and 2013. The innovation index ranks 82 countries based on their innovation capacity and forecasts their performance through 2013.

Solar power in Israel and the Israeli solar energy industry has a history that dates to the founding of the country. In the 1950s, Levi Yissar developed a solar water heater to help assuage an energy shortage in the new country. By 1967 around one in twenty households heated their water with the sun and 50,000 solar heaters had been sold. With the 1970s oil crisis, Harry Zvi Tabor, the father of Israel's solar industry, developed the prototype solar water heater that is now used in over 90% of Israeli homes. Israeli engineers are on the cutting edge of solar energy technology and its solar companies work on projects around the world.

Israel has embraced solar energy. There is no oil on Israeli land and the country's tenuous relations with its oil-rich neighbors made the search for a stable source of energy a national priority. Israeli innovation and research has advanced solar technology to a degree that it is almost cost competitive with fossil fuels. Its abundant sun made the country a natural location for the promising technology. The high annual incident solar irradiance in the Negev Desert has spurred an internationally renowned solar research and development industry, with Harry Tabor and David Faiman, of the National Solar Energy Center two of its more prominent members. At the end of 2008 a feed-in tariff scheme

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was approved, which immediately put in motion the building of many residential and commercial solar energy power station projects.
The leding companies in the field include: 3Gsolar, Arava Power Company, Chromagen, DI.S.P., EDIG Solar, AORA, 3Gsolar, Enert Global, EWA Technologies, Luz II, Millenium Electric, Millenium Solar, Pythagoras Solar, SolarEdge, Solel, and Zenith Solar.
The success in desalination has attracted global interest and currently an American multinational company is negotiating to acquire an Israeli solar company.

Another field of innovation is water desalination. Israel's annual rainfall is meager. However, on one side the country is surrounded by the Mediterranean which provides it with an ample source of water for desalination. In 2005 the world's largest desalination plant, located along Israel's southern Mediterranean coast, started operation The water treatment plant provides 100 million cubic meters (mcm) of desalinated water per year.

The plant will provide about 15 percent of the total household water in Israel when it's fully operational. The consortium comprises Israel's IDE Technologies and Elran Infrastructures, and France's Veolia Water. The total cost of the project was $250 million.

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New Google Insight tool developed in Israel

Google Inc. (Nasdaq: GOOG) yesterday launched a new forecasting feature for its Google Insights for Search, a new feature that can extrapolate a search term's future popularity based on its past performance. For example, a user can obtain trend data on a particular subject in order to make projections.

Insights for Search, launched a year ago, provides cross-referencing of searches by geography, time, subject, and other properties.

Google developed the "Insights for Search" tool at its Israeli R&D center, Google Israel Ltd. Yet Hebrew is not yet included in the 38 languages of the service.

Google Israel managing director Prof. Yossi Matias stated that the company was working on a Hebrew version of Insights for Search, but that "it's impossible to know how long it will take".

Since the forecasting tool of Insights for Search extrapolates from past or cyclical trends, it cannot be used to predict something completely new, such as the meteoric success of Twitter.

The new tool also includes an animated map that enables users to see dynamic changes in specific geographic regions over time. Google allows website owners to integrate comparative scenarios generated by the feature on their websites.

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India to acquire anti-aircraft missile system from Israel

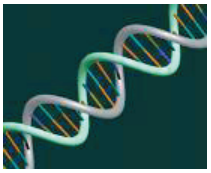
India will soon acquire anti- aircraft missile system from Israel in a bid to bolster its aging defenses and protect its troops and tanks from any aerial threat, a senior Indian Defense Ministry official said Tuesday.

"The Indian Defense Acquisition Council, headed by Defense Minister A.K. Antony and comprising the three service chiefs, has finally cleared a multi-billion dollar deal to procure anti- aircraft missiles from Israeli Aircraft Industries Rafael. The Low- level Quick Reaction surface to air missile called Spyder will help to protect India's tanks and armoured vehicles against enemy' s air attack," the official said, on condition of anonymity.

The Spyder is a low-level quick-reaction surface-to-air missile system which uses a combination of active radar missiles and infrared missiles to track and intercept jets, helicopters, unmanned aerial vehicles and precision guided munitions. The Spyder system has 360 degree engagement capability and the missiles can be launched from full-readiness state in less than five seconds after a target is acquired.

The Spyder's kill range is from less than one km to more than 35 kms and at altitudes from a minimum of 20 meters to a maximum of 9 kilometers. The system is capable tracking up to 60 targets at a time and can be operated in all weather conditions.

DNA evidence can be fabricated



DNA evidence can be fabricated - blood and saliva taken from one person can be made to appear as taken from someone else instead, say Israeli scientists.

'Today, DNA evidence is key to the conviction or exoneration of suspects of various types of crime, from theft to rape and murder,' the team wrote in their paper in the journal Forensic Science International: Genetics.

But the disturbing possibility is that DNA evidence can be faked. The team found current forensic procedures could not distinguish between their own artificial DNA and real DNA samples.

Lead author Dr Dan Frumkin said: 'If you can fake blood, saliva or any other tissue, you can engineer a crime scene. You have full control of the situation.'

Dr. Frumkin said: 'If you have some source material from the person who's DNA you want to fake, such as a hair, a glass they drunk from, or a cigarette butt, you could extract a minute piece of DNA using basic techniques you learn in your first year as an undergraduate in biology on equipment used in every biology lab.

'You can then produce billions of copies of it using very cheap kits that are commercially available. The process (known as whole genome amplification) is very, very easy if you have source DNA.'

The DNA can be applied to the surface of objects or could potentially be incorporated into human tissues and planted in crime scenes.

However, a fake sample can also be created just using DNA profiles stored in police databases. These are a series of numbers and letters that correspond to variations at 13 spots of a person's genome.

The scientists built up a library of more than 400 DNA snippets that represented common variants at each spot.

'This library contains all of the different variants found in the human population and you can create the desired profile,' Dr Frumkin said.

Dr Frumkin is founder of the company Nucleix,

which has developed a new test to tell whether DNA samples are real or fake.

VC investment lowest in decade

Israeli venture capital-backed start-ups raised $162 million in the second quarter of 2009, 16% less than the $194 million raised in the first quarter, and 44% less than the $291 million raised in the corresponding quarter of 2008, reports Kesselman & Kesselman - PricewaterhouseCooper Israel in its Israel MoneyTree Report for the second quarter.

61 high-tech companies raised capital during the second quarter, compared with 49 companies in the preceding quarter and 69 companies in the corresponding quarter. The average investment was $2.7 million in the second quarter, down from $4 million in the preceding quarter and $4.2 million in the corresponding quarter. The average investment was the lowest in five years.

Pitango to get China partner for venture fund

Israel's venture capital company Pitango plans to team up with a Chinese partner to launch a $100-$200 million fund with investment focus on China's start-up companies.

Pitango Venture Capital, run by Nechemia Peres, son of Israeli President Shimon Peres, is in talks with Shenzhen Capital Group Co Ltd, to raise a China-focused investment fund; Shenzhen Capital is China's top venture capital firm.

An official at Pitango said the firm has maintained close strategic relations with Shenzhen Capital for several years.

"For a long time now we have been examining cooperation and projects in China," the official said. "A year ago we made our first joint investment in Jinko Solar and we continue to work towards finding joint activities and strategic investments in China."

Pitango, one of Israel's largest venture capital firms, manages funds in excess of $1.3 billion in committed capital from international investors.

Israeli high-tech companies raised $279m in venture capital in Q2 2009

In the second quarter of 2009, 122 Israeli high-tech companies raised $279m from venture investors – both local and foreign. The amount was 40 per cent below the $465m raised by 115 companies in the second quarter of 2008, but five per cent higher than the amount raised in the first quarter of this year.

In the first half of 2009, capital raised by Israeli high-tech companies was $544m, 50 per cent below H1 2008 levels of $1.1bn (the highest since 2001).

"We are not surprised by these numbers," said Koby Simana, CEO of IVC Research Center. "The amount and rate of capital raised are in line with our earlier forecast of $1bn for the full year."

The average high-tech financing round was $2.29m, compared to $4.04m in the second quarter of 2008 and $2.85m in the first quarter of 2009. Seventy-four companies attracted more than $1m each. Of these, 13 companies raised $5m to $10m each, and four companies raised $10m to $20m each.

In the second quarter of 2009, Israeli venture capital funds invested $113m in Israeli companies, 30 per cent below Q2 2008 levels of $161m, but seven per cent higher than the previous quarter's $106m. In the first half of 2009 Israeli VCs invested $219m in Israeli companies, a 48 per cent decrease from the $423m invested by Israeli VCs in H1 2008. The sharp fall in investment activity will undoubtedly have an impact on the number of start-ups that will be able to operate in Israel in the future.

Israeli venture capital funds accounted for 40 per cent of the total amount invested in Israeli high-tech in Q2 2009, compared to 35 per cent in the second quarter of 2008. The remainder of capital

came from foreign investors as well as from non-VC Israeli investors.

Even though the proportion of investments between Israeli and foreign investors has been maintained, total amounts invested in Israeli high-tech companies have decreased by 50 per cent compared to the previous year.

First investments accounted for 38 per cent of total dollar investments by Israeli venture capitalists in the second quarter and 34 per cent in the first half of 2009, compared to 22 per cent and 35 per cent in the second quarter of 2008 and H1 2008, respectively. The average first investment by Israeli venture capitalists was $2.87m, while the average follow-on investment was $0.83m.

Cautious optimism reaches Israeli VC funds

Israeli venture capitalists are cautiously optimistic about the domestic and global economy. 53% of venture capitalists in the Deloitte Brightman Almagor Zohar VC Indicator Survey for the second quarter of 2009 expect a recovery during the second half of the year, and none expect a further deterioration. The present results contrast with expectations over the previous 18 months, when a majority of venture capitalists expected the economy to deteriorate.

47% of venture capitalists in the present survey expect the economic situation to remain unchanged over the next six months. In comparison, in the previous five quarterly surveys, 70% of respondents, on average, expected the economic situation to worsen over the coming six month period.

'Ghosts go through walls'

A technology company with a team of both Palestinians and Israelis recently gathered at the security barrier between Beit Jala and Har Gilo night to launch the beta version of their virtual desktop product, which allows users access to their data files and applications from any Internet browser.

In 2006, when Zvi Schreiber established G.ho.st (Global Hosted Operating SysTem), he chose to open the company's main headquarters in Ramallah. He also planned to set up another office in Modi'in, 15 kilometers away.

"Ghosts go through walls," Schreiber said at the launch, adding that he hoped the company's technological advancement could aid in bridging the communication gap between Israelis and Palestinians.

The group conducts its meetings mainly with Skype, a software application that allows users to communicate through video and audio calls over the Internet, as the two office locations make it difficult for the team members to meet in person.

"I wanted to make a statement that people who are traditionally at war can overcome physical and political barriers to come together to build a product," Schreiber said. "Traditionally Palestinians and Israelis don't work together because they consider each other as enemies. But it doesn't have to be that way."

The group developed the prototype of the virtual desktop a year after the company was founded, launching the alpha version of the product in May 2008. Around 200,000 people tested the alpha version. The beta version runs in over 20 different languages.

The idea of having remote access to a home desktop is not revolutionary, but the technology and approach G.ho.st has used makes the process faster and does not require the user to have a home computer.

G.ho.st's Web operating system gives each user his or her own virtual desktop hosted in a professional data center on the Web. Documents and photos can be uploaded to the Web page, or home computers can be synced to the virtual desktop, where 15 GB can be stored. Files can be shared between users and accessed through mobile phone Internet browsers.

"Creativity knows no race, color or boundary," said Quartet Envoy Tony Blair, who attended the launch night after spending the day in Nablus, where he surveyed the situation and progress of the company.

By opening the company headquarters in the West Bank, G.ho.st has created job opportunities and the potential for greater economic development between the territories and Israel.

G.ho.st hopes to serve as a role model for other companies. While several Israeli companies have begun to conduct research and some development in the West Bank on an outsourcing basis, Schreiber said he remained optimistic that more companies, especially in the hi-tech sphere, would begin to open in the territories

Since January, over 2,000 children and teenagers and 130 adults have participated in the programs offered by the three centers. The foundation hopes each center will service 1,000 people annually.

Promising new treatment for Alzheimer's

Research carried out at the Hebrew University of Jerusalem has resulted in a promising approach to help treat Alzheimer's disease in a significant proportion of the population that suffers from a particularly rapid development of this disease.

In the research at the Silberman Institute of Life Sciences of the Hebrew University, scientists solved a mystery as to why people who carried a mutated gene known as BChE-K were prone to more rapid development of Alzheimer's than those who had a normal version of the gene. This mutation appears in about 20 percent of the American and Israeli populations.

In theory, the carriers of the mutated gene should actually be more protected from the devastating effects of the disease, since the mutated protein (the enzyme that is the product of the gene) breaks down the neurotransmitter acetylcholine at a slower rate than in those who have the normal gene. The result is that the carriers maintain higher levels of this neurotransmitter, so they should in principle be protected from Alzheimer's disease, in which acetylcholine levels decrease.

Indeed, these carriers tend to develop the disease later than others, but when that happens, it progresses more rapidly and does not respond to medication. Therefore, the bottom line is that carriers of the mutated gene have a greater risk than others for disease progression.

The reason for this anomalous situation has been a puzzle for a long time, but the studies by the Hebrew University scientists solved it by finding the explanation for this increased risk, thereby offering a possible new therapeutic solution.

At the Wolfson Center for Structural Biology at the Hebrew University, the researchers found that the mutation in the BChE-K gene damages the very end, or tail, of the resultant mutant enzyme protein. This tail is the part of BChE which is important for protection from the Alzheimer's disease plaques. It does this by interacting with the Alzheimer's disease É¿-amyloid protein and preventing it from precipitating and forming those brain plaques which are the neuropathological hallmark of this disease.

To compare the normal protein to the K mutant, the researchers used synthetic tails of the normal and the K proteins, as well as engineered human BChE produced in the milk of transgenic goats at a U.S. company, Pharmathene. The goat- produced protein is prepared at Pharmathene for the U.S. military as protection from nerve gas poisoning (a result of earlier research at the Hebrew University). It was much more stable and efficient than the mutant protein, which suggests that the BChE-K carriers' susceptibility to Alzheimer's could be substantially improved by treating them with the engineered normal protein that is produced in the milk of the transgenic goats.

The current study was the last part in the Ph.D. work of Dr. Erez Podoly, now a post- doctoral

fellow with the Nobel laureate Roger Kornberg at Stanford University. Podoly was the joint student of Prof Oded Livnah and Prof. Hermona Soreq and won a National Eshkol fellowship in Biotechnology to perform this work.. Others who contributed to this study included Dr, Debbie Shalev and Dr. Ester Bennett from the Silberman Institute of Life Sciences, Harvey Wilgus from Pharmathene, and Dr Einor Ben-Assayag and Shani Shenhar-Tsarfati, a Ph.D. student, both from the Sourasky Medical Center in Tel aviv, where the Israeli carriers of BChE-K were identified.

The project is patented and is available for licensing by the Yissum Research Development Company of the Hebrew University of Jerusalem.

IBM explores data masking for better security

Businesses handle more data than ever before, and not everyone trusts their outsourcing or other partners.

IBM announced Magen -- short for "Masking Gateway for Enterprise" -- a proof-of-concept technology that scrambles sensitive data on PC screens without altering the underlying information.

The product was developed in IBM's (NYSE: IBM) Haifa research lab in Israel and required new concepts in handling images.

"It is a very complex notion: How to handle a display? The richness of displays, even static displays, is overwhelming," said Haim Nelken, the lab's manager of integration technologies. "It is hard to ... describe a display, or to identify within a display primitives like tables and then work them. Our key innovation involves the identification of primitives," he added.

PC's screen, rather then the underlying data, it is faster and more flexible than traditional data masking technologies, IBM said. Magen software builds on earlier work by IBM, Nelken added. "We already have a comprehensive library of de-identification routines. This library is used in various IBM products."

Anti-rocket defense system Iron Dome hits first try

An Israeli interceptor system developed to shoot down the short-range rockets favored by Palestinian and Lebanese guerrillas recently passed its first live trial according to an Israeli defense official.

Iron Dome's success could improve the prospects of Israel eventually ceding West Bank land to the Palestinians, as Israeli officials have said that any withdrawals should be conditional on the deployment of a reliable defense against rocket attacks.

Designed by state-owned Rafael Advanced Defense Systems Ltd., Iron Dome uses small guided missiles to blow up Katyusha-style rockets. Israel plans to station the first working unit outside the Hamas-ruled Gaza Strip next year.

"This was the first time Iron Dome was tested with the aim of a metal-to-metal result," an Israeli defense official said, describing the mid-air interception. "The (target) rocket was completely destroyed."

Iron Dome would be capable of intercepting rockets with ranges of between 5 km (2 miles) and 70 km (45 miles), the official said.

The project was spurred by Israel's 2006 war with Lebanese Hezbollah guerrillas, during which 4,000 rockets rained down on its northern border communities.

Israel has seen similar attacks by Palestinian guerrillas in Gaza, territory from which it withdrew in 2005. A surge in the salvoes prompted an Israeli offensive last December which many of them civilians.

"When you don't have a system like this, you can get dragged into wars that prove far more expen-

sive," said Alon Ben-David, a defense analyst.

Israel envisages Iron Dome becoming the lowest level of a multi-tier aerial shield capped by Arrow, a partly U.S.-funded system which shoots down ballistic missiles at higher altitudes.

Cabinet officials predict that once it is operational, the Iron Dome system will provide a successful defense against 90 percent of the rockets fired at Western Negev communities.

Mazor shares jump on report of first surgery

Mazor Surgical Technologies Ltd. (TASE:MZOR) recently announced the first use of its SpineAssist a robotic spinal surgical procedure aid for surgery of the neck vertebrae. The successful surgery increases SpineAssist's potential market by 30%.

Mazor said the successful new application for the SpineAssist - surgical procedures on neck vertebra through the nape of the neck - supplemented its current use for surgical procedures on the spine in the lower and middle back.

Surgery on the neck vertebrae is considered extremely difficult and complicated because of the great risk of paralysis if the spinal cord is damaged during the procedure.

Neck vertebrae procedures account for 30% of all spinal surgeries. Some of the procedures involve the insertion of implants into spinal cavities that are only a few millimeters in diameter and which contain critical nerves and arteries to the brain.

The surgery on the neck vertebrae was carried out in Germany on a patient with severe trauma of the vertebrae. The medical team used SpineAssist to navigate the location to position four titanium pins in the vertebrae.
The procedure took two hours, and was completed with no complications and to the complete satisfaction of the medical team.

Researchers develop Cancer "Breath" test

A material developed at the Hebrew University of Jerusalem that is designed to prevent adhesions (scar tissue) following surgery has led to approval by the U.S. Food and Drug Administration (FDA) of a product for use in pediatric cardiac surgery patients.

The product is the result of Prof. Daniel Cohn's invention of novel, tailor-made, biodegradable polymers for the prevention of post-surgical adhesions. SyntheMed Inc. of Iselin, N.J. in the U.S., received the technology from Yissum the Technology Transfer Company of the Hebrew University, and has now obtained FDA pre-market approval for the first product, REPEL-CV® Adhesion Barrier, for use in pediatric patients (21 and younger) who are likely to need secondary open heart surgery.

The generation of adhesions following heart surgery is of special concern, since they may affect cardiac function. Furthermore, in the frequent cases where repeat operations are required, adhesions obscure cardiac landmarks, making the procedure potentially life-threatening to the patient due to inadvertent vascular or cardiac injury.

In the U.S., there are 350,000 to 400,000 children with congenital cardiac abnormalities. Many neonatal and infant patients must undergo multiple surgeries before their defect is corrected, while other children require additional operations as they grow. TAdhesion Barrier product gives physicians another tool to help decrease the complications that may occur during these surgeries. .

"I am very excited that the long process that started several years ago in our laboratory at the Institute of Chemistry of the Hebrew University with the design and synthesis of a family of biodegradable polymers was recently approved by the FDA," said Prof. Cohn.

"This biomedical product harnessed the unique properties of a family of custom-made, biodegrad-

able polymers aimed at treating a large, incredibly widespread clinical problem, which pertains to all surgeries: post-operative adhesions. Each and every surgery conducted inevitably results in post-surgical adhesions, and the polymeric film developed at the Hebrew University allows us to minimize those adhesions."

The approval by the FDA came after its approval in Europe and Canada. Receiving the approval of the different regulatory agencies was the result of the work of a large team. It started with the research conducted by Prof. Cohn and his students, who largely contributed to this endeavor, and continued with the work done at SyntheMed Inc., that developed the product and brought it to the clinic.

"I would like to thank each and all of them and acknowledge their pivotal contribution to the success of this project, all along the journey," said Prof. Cohn.

Two research teams, in Israel and in Colorado, are working on tests that detect cancer on a patient's breath.

Dr. Hossam Haick, part of a research team at Technion, the Israel Institute of Technology, created a device that "sniffs" out tiny particles, detecting the presence of cancer anywhere on a patient's body.

Another member of that Israeli research team is working at the University of Colorado Cancer Center. Their device is apparently accurate 92% of the time, and is so sensitive that it can spot even a few cancer cells before a tumor actually develops.

The cancer sniffing 'mechanical nose' has its roots in studies performed on dogs that were able to sniff out cancer.

The device that is being developed by the Israeli team has been shown to be more accurate, detecting tiny particles one-ten-thousandth the width of a human hair.

According to experts, patients may be able to use this breath test sometime in the next four years.

Desert rhubarb - a self-irrigating plant

Researchers from the Department of Science Education-Biology at the University of Haifa-Oranim have managed to make out the "self-irrigating" mechanism of the desert rhubarb, which enables it to harvest 16 times the amount of water than otherwise expected for a plant in this region based on the quantities of rain in the desert. This is the first example of a self-irrigating plant worldwide.

The desert rhubarb grows in the mountains of Israel's Negev desert, where average precipitation is particularly low (75 mm per year). Unlike most of the other desert plant species, which have small leaves so as to minimize moisture loss, this plant is unique in that its leaves are particularly large; each plant's rosette of one to four leaves reaches a total diameter of up to one meter. Prof. Simcha Lev-Yadun, Prof. Gidi Ne'eman and Prof. Gadi Katzir came across this unique plant growing in the desert while studying the field area with students of the Department of Science Education-Biology of the University of Haifa-Oranim, and noticed that its leaves are unusually large and covered with a waxy cuticle. They observed an exceptionally ridged structure on each leaf, forming a leaf structure that resembles the habitat's mountainous topography.

The scientists explained that these deep and wide depressions in the leaves create a "channeling" mountain-like system by which the rain water is channeled toward the ground surrounding the plant's deep root. Other desert plants simply suffice with the rain water that penetrates the ground in its immediate surroundings.

The findings have shown that the natural selection process has resulted in the evolution of this plant's extremely large leaves, which improved its ability to survive in the arid climate of the desert. The results of experiments and analysis of the plant's growth - in an area with an average annual rainfall of 75 mm - showed that the desert rhubarb

is able to harvest quantities of water that are closer to that of Mediterranean plants, reaching up to 426 mm per year. This is 16 times the amount of water harvested by the small-leafed plants of the Negev desert region. When the research team watered the plant artificially, they observed how the water flows along the course of the leave's depressed veins to the ground surrounding the plant's single root and then penetrates the ground to a depth of 10 cm or more. Under the experimental conditions, water penetrated the ground only as deep as 1 cm.

"We know of no other plant in the deserts of the world that functions in this manner," the researchers concluded.

Magal gets airport, nuclear plant protection contracts

Magal Security Systems Ltd. (Nasdaq: MAGS; TASE: MAGS) reported that it won several deals in May, for a total of $8.5 million.

The deals are to secure 2 airports and several nuclear power plants in South-East Asia, renewing border gate systems in Israel, and expanding an existing security system deal in Eastern Europe.

Most of the contracts are for turnkey projects, which are delivered ready for operation. The orders are expected to be supplied by the end of 2009.

The first project that will be undertaken will be expanding the security system at an Eastern Europe airport, and combining a taut wire system to detect break-ins through cable sensors. The perimeter intrusion detection system deal is worth $1.6 million.

The second project will be updating border gates for Israel, using the same type of system. The project is worth $4.6 million and includes building a complete, ready-to-use system, and will also integrate third-party security equipment.

AORA launches first hybrid solarized gas turbine power station

AORA, a developer of applied ultra-high temperature concentrating solar power (CSP) technology, launched the world's first hybrid solar thermal gas turbine power station at Kibbutz Samar in southern Israel.

This marks the first time that a CSP solar power station has the capability of providing environmentally-friendly, or "green" power 24 hours a day, seven days a week - at a local level.

"The size and relative price of our solar power system means it can be implemented in local as well as large-area instillations," said Haim Fried, AORA's CEO. "Today marks the beginning of a new era for solar energy, where any city, town or village can now consider AORA for its energy needs, due to the attainable price point and build-out time of just several months, versus other CSP timelines of several years."

AORA's Samar "Power Flower" station - so named due to the unique yellow tulip design concept created by architect Haim Dotan for the plant's solar tower - consists of a field of 30 tracking mirrors (heliostats) situated on half an acre of land. The power module is expected to supply 100 kW of power to the national grid, enough to sustain approximately 70 households. Each of the station's 30 heliostats tracks the sun and reflects its rays towards the top of a 30 meter-high tower housing a special solar receiver along with a 100kW gas turbine. The patented receiver uses the sun's energy to heat air to a temperature of 1,000 degrees Celsius and directs this energy into the turbine. The turbine converts the thermal energy into electric power that will be fed directly into the national grid.

AORA's hybrid approach allows the system to run on solar radiation input, as well as almost any alternative fuel, including biogas, biodiesel and natural gas. This flexibility enables the module to run in a variety of operation modes - from solar-only mode, where electricity is supplied when

there is ample sunlight, to hybrid mode, where fuel helps generate electricity when sunlight is insufficient, such as at night or when it is cloudy. This capability offers uninterrupted, green power 24 hours-a-day.

At the launch, Chile-based CAM, an integrated energy solutions company, signed an agreement with AORA giving CAM the exclusive rights to market, distribute and construct AORA's technology in Chile while Greenearth Energy Ltd, a green energy company based in Melbourne, signed an agreement with AORA to exclusively market and distribute the company's technology across Australia.

Additionally, AORA and the Spanish company AORA SL signed an MOU awarding AORA SL the right to sell the technology in Spain and Portugal.

Dr. Ruth Ben-Yakar appointed Chief Business Officer of Yeda Research

Yedapromotes the industrial application of inventions made by Weizmann Institute scientists. Dr. Ben-Yakar replaces Dr. Einat Zisman, who served in this post for eight years and will soon become President and CEO of Hadasit, the technology transfer company of Hadassah Medical Organization.

Dr. Ben-Yakar (Maya) earned a Ph.D. with honors from the Weizmann Institute in 2001. Her doctoral research, under the guidance of Prof. Moshe Oren of the Institute's Molecular Cell Biology Department, focused on the growth of cancer cells and won her prestigious scholarships from a number of institutions, including the Wolf Foundation.

Her most recent appointment was Vice President for Project Management at Gamida Cell. Among other duties, she managed the StemEx project, part of a joint development by Gamida and Teva Pharmaceutical Industries Ltd. In addition, she was involved in the company's business development.

Prior to that, Dr. Ben-Yakar served as Vice President for Development and Applications at Procognia. She coordinated wide-ranging R&D activities, was responsible for managing the company's collaborative projects and took part in various business ventures as well as in leading the company to its initial public offering at the Tel-Aviv Stock Exchange.

Earlier in her career in the biotech industry, she served as a senior project manager at QBI, conducting R&D in the area of cancer therapy.

Hebrew U. researchers shed light on the brain mechanism responsible for processing of speech Researchers from the Hebrew University of Jerusalem have succeeded for the first time in devising a model that describes and identifies a basic cellular mechanism that enables networks of neurons to efficiently decode speech in changing conditions.

The research may lead to the upgrading of computer algorithms for faster and more precise speech recognition as well as to the development of innovative treatments for auditory problems among adults and young people.

Our brain has the capability to process speech and other complex auditory stimuli and to make sense of them, even when the sound signals reach our ears in a slowed, accelerated or distorted manner.

However, the neuronal mechanisms that enable our brain to perceive a word correctly, for example, that is pronounced in different ways by different speakers or to understand a heavy accent, was a mystery to scientists until now.

Research associate Dr. Robert Gütig and Prof. Haim Sompolinsky of the Edmond and Lily Safra Center for Brain Sciences at the Hebrew University have succeeded in describing a cellular process by which sensory neurons in the brain can automatically adjust their perceptual clocks

and thus correct large temporal variations in the rate of sounds and speech that arrive from the environment.

According to their findings, which were recently published in the PLoS Biology journal, the biophysical mechanism that exists in our brain enables single nerve cells in the cerebral cortex to perform word identification tasks almost perfectly.

The understanding of the process of speech decoding and the possibilities of its implementation in technology – by the development of neural network algorithms for the identification and processing of various patterns of sound signals – could lead to the significant upgrading of speech recognition technology in communications and computing, for instance in telephone voice dialing or in voice and sound monitoring devices.

The technology has been patented by Yissum, the Hebrew University's technology transfer company.

IPO market revives

After two years of waiting, it looks as though the US IPO market is starting to show signs of life. In the second quarter, six technology companies made successful IPOs. The IPO pipeline is starting to grow, and there is hope that Israeli companies will return to this playing field.

The "Wall Street Journal" reports that 108 applications were received last month from companies seeking a flotation, not all of them technology companies. It seems that investors will demand that any candidate must show a profit of at least $1.5 million in each of the past two years before it will be able to go public.

The companies that have made IPOs this year are stable and profitable, most of them with over $200 million annual revenue.

Israel Nakel. head of Initial Public Offerings at Deloitte Brightman Almagor, believes that the US IPO market will open up to large offerings in the second quarter of 2010, and he is optimistic about the chances of technology companies.

"Several Israeli companies are considering an offering in the US soon. The outstanding ones will be high-tech, industrial, and consumer goods companies with proven capabilities," he says.

"Of the eleven companies that made IPOs this year, six were from the technology, media, and communications sectors. This is the only group of companies that posted a rise in the number of IPOs in the second quarter of 2009. In comparison with 2008, this represents a doubling of the number of offerings in this field."

To all of our Jewish friends and subscribers we extend our best wishes for a Happy, Healthy and Prosperous New Year