ISRAEL HIGH-TECH
& INVESTMENT REPORT

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Technology and Innovation Thrive

Scientists in Israel , found that the brackish water, drilled from underground desert aquifers, hundreds of feet deep, could be used to raise warm-water fish. The geothermal water, is less than one-tenth as saline as sea water, free of pollutants, and a toasty 98 degrees on average, proves an ideal environment.

Israeli-developed designer-eyeglasses, promise mobile phone and iPod users, a personalized, high-tech video display. Available to US consumers next year, Lumus-Optical's lightweight and fashionable video eyeglasses, feature a large transparent screen, floating in front of the viewer's face that projects their choice of movie, TV show, or video Game.

When Stephen Hawkins visited Israel recently, he shared his wisdom with scientists, students, and even the Prime Minister. But the world's most renown victim of amyotrophic lateral sclerosis (ALS), or Lou Gehrig's disease, also learned something, due to the Israeli Association for ALS' advanced work in both embryonic and adult stem cell research, as well as its proven track record with neurodegenerative diseases. The Israeli research community is well on its way, to find a treatment for this fatal disease, which affects 30,000 Americans.

Israeli start-up, Veterix, has developed an innovative new electronic capsule that sits in the stomach of a cow, sheep, or goat, sending out real-time information on the health of the herd, to the farmer via Email or cell phone. The e-capsule, which also sends out alerts if animals are distressed, injured, or lost, is now being tested
on a herd of cows, in the hopes that the device will lead to tastier and healthier meat and milk supplies.

The millions of Skype users worldwide will soon have access to the newly developed KishKish lie-detector. This free internetservice, based o n

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The Global Chaos and Israel

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voice stress analysis (a technique, commonly used in criminal investigations), will be able to measure just how truthful that person on the other end of the line, really is.

Beating cardiac tissue has been created in a lab from human embryonic stem cells by researchers at the Rappaport Medical Faculty and the Technion-Israel Institute of Technology's biomedical Engineering faculty.
The work of Dr. Shulamit Levenberg and Prof. Lior Gepstein, has also led to the creation of tiny blood vessels within the tissue, making possible its implantation in a human heart.

Israel 's Magal Security Systems, is a leader in computerized security systems, with products used in more than 70 countries around the world, protecting anything from national borders, to nuclear facilities, refineries, and airports.

The company's latest product, DreamBox, a state-of-the-art security system that includes Intelligent video, audio and sensor management, is now being used by a major water authority on the US east coast to safeguard the utility's sites.

It is common knowledge that dogs have better night vision than humans and a vastly superior sense of smell and hearing. Israel 's Bio-Sense Technologies, recently delved further, and electronicallyanalyzed 350 different barks. Finding that dogs of all breeds and sizes, bark the same alarm when they sense a threat, the firm has designed the dog bark-reader, a sensor that can pick up a dog's alarm bark, and alert the human operators.

This is just one of a batch of innovative security systems to emerge from Israel, which Forbes calls 'the go-to country for anti-terrorism technologies.' Israeli company, BioControl Medical, sold its first

electrical stimulator to treat urinary incontinence to a US company for $50 Million. Now, it is working on CardioFit, which uses electrical nerve stimulation to treat congestive heart failure.

With nearly five million Americans presently affected by heart failure, and more than 400,000 new cases diagnosed yearly, the CardioFit is already generating a great deal of excitement as the first device with the potential to halt this deadly disease.

Wave energy SDE wins deal in Muslim African country

Wave power comp any SDE Energy and Desalination Ltd. has obtained a 25-year franchise from a Muslim country in Africa to build a 100-megawatt ocean wave-driven power station at an investment of $100 million. The company expects $1 billion revenue over the franchise period.
SDE, run by managing director Shmuel Ovadia, said that sea waves have four times the power generation potential per square meter than wind power. The company claims that its wave power technology can provide 500 times the electricity needs of the world's entire population. The company's technology has additional advantages, including high exploitation ratio, no pollution, and a lower cost than wind turbines.

Coastal countries have an opportunity to utilize

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sea wave power to generate electricity, which will provide three benefits: savings in foreign currency currently needed to buy oil or coal; clean energy production; and grants from the World Bank.

2008 capital raising expected to reach an eight year record high

One hundred and twenty-four Israeli high-tech companies raised $600 million in the third quarter of 2008 from venture investors – both local and foreign. The quarterly amount was the highest reported in the last eight years - 45 percent above the $414 million raised in the third quarter of 2007, and up 29 percent from the $465 million raised in the previous quarter.

"Q3 capital raising reached a record eight-year high, exceeding all projections for the quarter," said Efrat Zakai, Director of Research at IVC. "We don't expect the same rate of investment in the coming quarters. However, 2008 will be logged as a record year, even if the fourth quarter comes in considerably below average", Zakai stated.

The average financing round was $4.84 million, compared to $3.83 million in the third quarter of 2007 and $4.04 million in the second quarter of 2008. Eighty companies attracted more than $1 million each. Of these, 14 companies raised $5 million to $10 million each, 12 companies raised $10 million to $20 million, four companies raised $20 million to $40 million and two companies raised more than $40 million each.

In the three first quarters of 2008, Israeli high-tech companies raised $1.68 billion, 34 percent above the $1.25 billion raised in the corresponding period of 2007.

Israeli VC Investment ActivityIn Q3, Israeli VCs invested $206 million in Israeli companies, compared with $172 million invested in Q3/2007 and $161 million invested in the previous quarter.

The Israeli VC share of the total amount invested in Israeli high-tech was 34 percent, with the remainder of capital coming from foreign investors as well as non-VC Israeli investors.

First investments by Israeli VC funds were 28 percent of their total investments in the third quarter, compared to 51 percent and 22 percent in Q3/07 and Q2/08, respectively.

The average First investment by Israeli VCs was $2.76 million, while the average Follow-on investment was $1.22 million.

In the first three quarters of 2008, the Israeli VC fund share of investments in Israeli high-tech companies was 37 percent, compared to 43 percent in the corresponding period in 2007.

Foreign investors leave TASE but increase direct investment

Foreign direct investment in Israel increased sharply during the third quarter of 2008, despite the global economic crisis. Foreign direct invest via the banks totaled over $2 billion in the third quarter, the Bank of Israel reported.

. Foreign direct investment via the banks amounted to $1.38 billion in the second quarter and $1.63 billion in the first quarter, and totaled $5.82 billion in 2007 as a whole.

Total direct foreign investment was $1.47 billion in the second quarter of 2008 and $2.19 billion in the first quarter, and $9.67 billion in 2007 as a whole. The Bank of Israel did not disclose list foreign investment not made through the banks for the third quarter.

Foreign direct investment via the banks totaled $996 million in September alone. The two largest investments were $200 million in a chemicals company and $175 million in an electronics company.

Foreign investment in the Tel Aviv Stock Exchange (TASE) went the other way, with heavy sales reflecting the global financial crisis. Net foreign investment on the TASE fell by $511 million in September; a net $595 million worth of stocks were sold, offset by a net $84 million investment in bonds.

Foreign investors sold more than $300 million in chemical companies' shares and $240 million in bank stocks in September.

Direct investment abroad via the banks by Israelis

totaled $545 million in September and $1.15 billion in the third quarter.

The September figure includes a $175 million in a foreign electronics company - the same company in which foreign investors made a local investment in the same amount.

Israelis' overseas portfolio investments fell by a net $424 million in September: net investment in foreign stocks totaled $806 million, which was more than offset by a net $450 million in foreign stocks in September, mostly through withdrawals from mutual funds.

Sokol the personal sweet water purification system

A young Water-oped ranging in a form a 100 liter tem. Israeli company called sheer Ltd. has devela series of products, from a personal purifier of a bottle cap, to up to water processing sys-

The multi purpose purifying system for large capacity of water, is easy to use and is independent of external energy sources. It is available in various configurations (20, 50, 100 liters). The system treats organic, biological, and chemical water contaminates. It also serves hospitals, EMS, federal and private institutes.

The Sulis Personal Purification System (PPS) takes all the ingredients needed to transform dirty water into clean water - and has miniaturized the technology to fit into the top of a cork that can be plugged into virtually any size bottle, container or tap.

Tested and certified by authorized labs and approved materials by international standards.

"Above everything else, the product we've developed is going to save lives," explained Yossi Sandak, the CEO of Watersheer. "Over 1.6 million children under the age of five die each year in the undeveloped world from drinking untreated water. What we have is a solution to reduce death in the world that is not a medical solution, but simply providing people with clean drinking water."

The small unit is lightweight and small, 10 grams, 2.7 Inches / 7 cm) and is designed to fit onto most universal bottles. According to Sandak's partner, Ron Shani, the founder, chairman and vice president of Watersheer's R&D division.

Sulis system treats water from orther sources containing organic, biological and chemical contaminates.
Sandak added that the company is looking for investors in order to open a production plant in Sderot once orders start pouring in.
While they don't affix an actual price to the system, Shani and Sandak say that the Sulis will cost no more "than a large coffee and cake at Starbucks." Considering one Sulis cork can purify 1,000 liters of water before being replaced, that's quite a bargain.

CNN election night 'hologram' breaks newsgathering ground

A 3-D 'hologram' of CNN correspondent Jessica Yellin appears in the network's Election Center in New York from a special green-screen set in Chicago's Grant Park during Sen. Barak Obama's Tuesday night presidential election celebration.

CNN's Election Night coverage Tuesday introduced an advanced graphics and compositing effect that brought a 3-D reproduction of political correspondent Jessica Yellin from Chicago into the network's Election Center in New York for an interview with anchor Wolf Blitzer.

Dubbed a "hologram" by CNN, the technology responsible for the feat actually was more akin to a weather set with chroma key effects on steroids. At the center of the setup was a special circular green-screen set inside a tent erected in Chicago's Grant Park for coverage of Sen. Barack Obama's victory gathering. Ringing the set were 35 equidistantly spaced miniature HD video cameras positioned at eye level in a 220 degree arc.
To maintain the correct perspective on Yellin, the remote HD cameras received tracking data via Vizrt software from the studio cameras in the CNN Election Center in New York City. When a studio camera

moved, changing the angle at which the Election Center was shot, the system recording and processing video on-site received the telemetry data from the studio camera so it could select image data from the appropriate miniature HD cameras and assemble it into frames matching the perspective of the studio shot.

In essence, the system — from Israel-based SportVU — collected the appropriate geometry data from the shot of the correspondent, drew her silhouette and textured it with the pixels that were appropriate for the correct piont of view. The SportVU system acted as a plug-in to the Vizrt graphics system, which constantly output an SDI stream that was transmitted from Chicago to CNN's New York facility where it was composited through an Ultimatte keyer within the CNN Election Center.

The 3-D representation of Yellin "beamed" into the CNN Election Center (à la "Star Trek") and emanated a blue glow reminiscent of the hologram projection of Princess Leia from "Star Wars"). The glow was added to help viewers distinguish between what was real and the effect.

The idea to incorporate the hologram into CNN's election night coverage belonged to CNN senior VP and Washington bureau chief David Bohrman. In discussing the technology with Blitzer Nov. 5 during CNN's "The Situation Room," Bohrman explained that he has been trying to get this done for a dozen years.

While Bohrman called the effect "a little ornament on the tree" of the network's much larger effort to deliver a timely, accurate picture of that day'political races, he forecasted that in coming years there will be a place for this type of technology in regular news coverage, because "it allows for a much more intimate possibility for a remote interview."

Later in the evening, CNN used the technology to bring a 3-D representation of musical talent into the CNN Election Center from Grant Park. A similar setup was on-site in Phoenix, AZ, to cover Sen. John McCain's election night gathering; however, it was not used.

CA buys role management company Eurekify

.CA Inc. (NYSE: CA) announced that it is acquiring Israeli identity and role management solutions developer Eurekify Ltd. The companies did not disclose the terms of the deal, but sources believe that the price tag is $30-40 million.

The two companies already collaborate and they expect to close the deal by the end of the month. Ra'anana-based Eurekify's operations will be integrated into CA's business.

Eurekify director Dr. Ron Rymon founded the company in 2002. The CEO is Azi Cohen, who was previously CEO of Aduva and SCP Systems. Eurekify was established at Incentive Incubator Ltd. in Ariel. Peregrine Ventures owns the incubator and provided the company with $500,000 in seed money. Roni Einav, a company director and founder of New Dimension, is also an investor.

Eurekify targets one of the most sensitive areas in information security and computer infrastructure management - identity and access management (IAM) of user applications and enterprise resource management (ERM). The large number of software applications and frequent changes at large enterprises has made the management of authorization of employee access to information and applications a very complex task, especially given increasing regulatory requirements. Eurekify has developed an engine that aims to automatically align a procedure or person's access to his job at the enterprise.

Regarding the current business climate, Cohen said, "We were founded during one crisis, which we survived. If we were to remain alone, we'd survive this crisis too." He said that the company was sold in order to become part of a large corporation that could leverage sales. "We want to reach every enterprise in the world with more than 1,000 employees, which is hard for a company of our size. It can be assumed that every successful software company at some point tries to approach large software companies that have the capability to make large-scale sales," he added.

Eurekify and Peregrine Ventures declined to disclose how much money has been invested in the company. Peregrine general partner Gil Weil said, "We're pleased by the amount of money we've made

and by the return we've brought our investors."
Eurekify raised several million dollars from Peregrine in the last financing round in early 2008. The amount guarantees a fairly high return on investment for Peregrine's large shareholders. Peregrine raised a new $40 million fund in 2007, after fully investing its first $15 million fund, which it raised in 2001.

Eurekify is CA's fourth acquisition of an Israeli company and its eighth acquisition of a company that has activity in Israel. Last month, CA acquired IDFocus Ltd. for an undisclosed amount. CA acquisitions include XOSoft in 2006, as well as Abirnet and Security-7 in 1999.

Spinning natural proteins into fabrics for new wound-repair products

Scientists in Israel are reporting the first successful spinning of a key natural protein into strong nano-sized fibers about 1/50,000th the width of a human hair. The advance could lead to a new generation of stronger, longer-lasting biocompatible sutures and bandages to treat wounds.

Eyal Zussman and colleagues point out that researchers have tried for years to develop wound repair materials from natural proteins, hoping that such fibers would be more compatible with body tissue than existing materials. Scientists recently focused on producing these fibers through "electrospinning," a high-tech weaving process that uses electrical charges to draw out nano-sized fibers from a liquid. But the approach has achieved poor results until now.

In the new study, the scientists describe a new method for producing electrospun polymers using bovine serum albumin (BSA), a so-called "globular" protein found in cow's blood. BSA is similar to serum albumin, one of the most abundant proteins in the human body. The method involves adding certain chemicals to a solution of BSA to loosen the bonds that hold these highly-folded proteins together.

That results in a thinner, more spinnable protein solution. Using electrospinning, the process resulted in strong fibers that are easily spun into suture-like threads or thick mats resembling conventional wound dressings. This approach is being followed by the groups of Zvi Nevo and Abraham Katzir at Tel-Aviv University, the researchers said, noting that the new method also can be applied to other types of natural proteins.

Globes' most promising start-up of 2008: Amobee

The cellular advertising solutions developer won the prize at the 12th annual Journey Conference of Globes and Ernst & Young.

The Globes' most promising start-up 2008 is cellular advertising solutions developer Amobee Ltd. The company is managed by Zohar Levkovitz. Its investors inlcude Sequoia Capital Israel, Accel Partners, Cisco Systems, Globespan Capital Partners, Motorola Ventures, Telefonica, and Vodafone Group.

The award was announced at the 12th Annual Journey Conference of "Globes" and Ernst & Young Israel.
InfoGin Ltd. was the runner up and Vascular Biogenics Ltd. was in third place.

"Globes" published the third edition of its annual high-tech magazine, "Blogs". "Blogs" picked ten promising start-ups as finalists and the ten most influential entrepreneurs whose influence is expected to continue through 2009.

"Blogs" includes in-depth interviews with top Israeli and foreign entrepreneurs, who discuss how the global crisis is affecting them and the industry as a whole. It also includes articles on the growing biotechnology and cleantech industries. There is also a survey with surprising responses to questions about what people really think about high-tech employees, and a special project about the gaming industry, which has an annual turnover of tens of billions of dollars.

The top ten most promising start-ups 2008-09:

InfoGin, which adapts websites to cellular screen formats; raised $28 million.

Vascular Biogenics is developing atherosclerosis and cancer treatments; raised $28 million.
Altair Semiconductor Ltd., a fabless developer of mobile WiMAX chipsets; raised $48 million.
N-Trig Ltd., which develops and makes advanced touch screens; raised $52 million.

Payoneer Inc., a provider of online prepaid credit cards; raised $14 million.
Aternity Inc., a developer of PC performance monitoring solutions; raised $13 million.

Dune Networks Ltd., a fabless semiconductor supplier of networking devices; raised $54 million.
Israeli solar company 3GSolar to go public in Canada

Cost is only one advantage to replacing silicon; another is that there may be limited quantities of silicon left, and the high-energy process of working with the substance is not necessarily "green." Goldstein has suggested that his technology could be ideal for providing electricity to places that currently have none, such as Third World countries.

Johnson & Johnson acquires Omrix Biopharmaceuticals

The US giant will pay $465 million for the Israeli company, which develops biosurgical sealants.
Johnson & Johnson Inc. (NYSE: JNJ) has acquired Israeli biopharmaceutical company Omrix Biopharmaceuticals Ltd. (Nasdaq:OMRI), bringing to an end eight years of partnership between the two companies and several months of acrimonious negotiations and endless rumors. Johnson & Johnson will reportedly pay $27 a share for Omrix, which develops and produces biosurgical sealants for of homeostasis in surgery, giving it a value of $465 million.

The rumors of an imminent sale broke at the end of last week, after a team from Ethicon Inc. the Johnson & Johnson subsidiary partnering with Omrix arrived in Israel and began a thorough review of the company. The rumors sent Omrix's share price up almost 30% $21.20 in trading on Nasdaq.

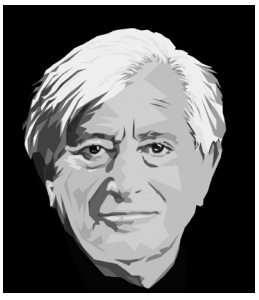
Johnson & Johnson has been in talks on the acquisition of Omrix for a number of months, following an eight-year partnership between the two during which the idea of a sale was repeatedly broached.

The atmosphere of the talks has been highly charged in recent months, with Omrix founder president and CEO Robert Taub initiating talks with other potential suitors in a bid to up the company's price. Among the companies approached were German drug giant Bayer AG (LSE: BYR; XETRA: BAY), and Ofer Group, but these talks apparently did not progress to a concrete offer and did not pose a real threat to the deal with Johnson & Johnson.

Omrix has confirmed the report. Taub will receive $100 million.

Teva maintains growth

Teva (Hebrew for "nature") was founded in 1935 by Elsa Kuver and Dr. Gunter Friedlander in Jerusalem. Prior to World War II, Germany was the center of the global pharmaceutical industry. Many immigrants from that country brought with them pharmaceutical expertise that provided a firm foundation upon which the Israeli drug industry was built. Notwithstanding the ongoing violence of the Middle East, Teva enjoyed some advantages over its competitors around the world. For one, Israel attracted a high concentration of scientists--more per capita than any nation in the world. Furthermore, the Israeli government granted Teva tax subsidies to encourage the development and production of new drugs. It was in this environment that Teva grew, going public in 1951 on the Tel Aviv Stock Exchange.



Having consolidated its domestic position, Teva began to expand geographically in the early 1980s. Eli Hurvitz, a kibbutznik who joined the company in a junior management

position after graduating in economics and business administration from Hebrew University in 1957, was destined to transform Teva into a global pharmaceutical powerhouse. He perceived an opportunity to penetrate the U.S. market when the federal Waxman-Hatch Act passed by Congress in 1984. This legislation concerned generic drugs, treatments that have lost their patent protection. Also known as multi-source or off-patent medicines, generics are chemically identical to branded prescription drugs, but are priced at 30 percent to 70 percent less than patented versions.

Hurvitz used the generics segment as Teva's entree into the U.S. pharmaceutical market. In 1985 whien the company forged an agreement with chemical conglomerate W.R. Grace to create TAG Pharmaceuticals, a 50-50 joint venture. In 1985, TAG acquired Lemmon Co., a Pennsylvania-based company. Lemmon became the sales and distribution arm for generics manufactured by Teva in Israel. Although CEO Hurvitz later reflected that "an Israeli who's coming to the States has a David and Goliath syndrome," he reminded himself that little David prevailed in that Biblical battle. The potential Teva saw in Lemmon soon turned to profits; the U.S. venture's sales more than doubled from $17 million at the time of its acquisition to about $40 million in 1987, by which time it was marketing seven generic versions of branded drugs.

The company's first major new drug, known as Copaxone, was originated more than two decades earlier in the laboratories of Israel's Weizmann Institute, where doctoral student Dvora Teitelbaum was studying the use of synthetic proteins to quell multiple sclerosis (MS) attacks in animals. Together with Professors Michael Sela and Ruth Arnon, Teitelbaum spent 15 years isolating and researching the polymer COP-1 (later branded Copaxone), passing preliminary clinical trials in 1986. The treatment reduced the relapse rate for people in the early stages of relapsing-remitting MS by anywhere from 25 percent to 30 percent in clinical trials. At that time, the Weizmann Institute teamed up with Teva to bring the drug to market. Since Copaxone's patent had expired during the long development process, Teva requested and received orphan drug status from the U.S. Food and Drug Administration (FDA). About one-third of the 350,000 MS sufferers in the United States stood to benefit from the treatment.

Initially launched in Israel, Copaxone earned FDA approval in 1997. The rollout achieved several milestones, both for Teva and for MS sufferers. Copaxone was the first drug developed in Israel to achieve FDA approval for distribution in the United States. Unlike its interferon-based competitors, it was also the first drug developed specifically to treat MS. Copaxone has been approved for the treatment of relapsing-remitting multiple sclerosis.

In a two-year -, randomized, double blind, placebo-controlled trial of 251 patients, Copaxone was shown to reduce relapses by an average of 29 percent when compared with placebo.

Multiple sclerosis is a chronic, often progressive disease of the central nervous system (brain, spinal cord and optic nerves), which affects 350,000 people in the United States (approximately 10,000 people are diagnosed each year).

For Eli Hurvitz the approval of Copaxone by the FDA was one of the great moments in his life and ranks in parallel with his being awarded the Israel Prize.

Under Hurvitz's leadership Teva has become a global pharmaceutical company specializing in the development, production and marketing of generic and proprietary branded pharmaceuticals as well as active pharmaceutical ingredients.
It is is among the top 20 pharmaceutical companies and is the largest generic pharmaceutical company in the world.

Net Income for 2007 reached $1.952 billion, a 5% increase over 2006
Net sales for 2007 were $9.4 billion, with global Copaxane sales of $1.713 billion

Teva's share price and net profits rose substantially of percentage points during Eli Hurvits's active leadership. tenure.

He served as Teva's President and Chief Executive Officer for over 25 years and recently completed over forty years with Teva. Hurvitz has served as Chair-

man of the Board of Teva since April 2002. Hurvitz received the Israel Prize for Lifetime Achievement for a Unique Contribution to the Society and to the State of Israel.
Hurvitz, 78, stepped down as CEO in 2002 but continues to serve as chairman.

"The dynamics of the generic industry are influenced by the growing number of people going on pension, people who are sicker and have less money for medicinals. As a result the outlook for generics has become more expansive. When our generics are launched, in a few days we have 90% of the market and in a few weeks the whole market," says Mr. Hurvitz.
"As a result, he points out, Teva is able to post 20%, after tax, profit margins. In the western world generics are garnering 60% of the market. In Europe the the development is slower due to the splitting up of industry, an absence of drug chains.

"Teva, by far, is the world's largest generic producer. It has carved for itself market leadership and future strategy'" says Mr. Hutvitz. Teva has about 160 drugs in the FDA pipeline waiting approval. This sum is greater than that of the next two largest companies in the field. Teva is expected to double its sales in the next 4-5 years and to maintain its profit margins.

Software developeed to improve your looks

Want to optimise your looks without radically altering them? An Israeli team of computer scientists may have the answer.

They have developed a computer software model based on the innate preferences that studies show we have for human faces.

"This technology could become a product where for example there's a web service where people upload their photographs and have them enhanced or beautified by our software," said Professor Dani Lischinksi of Hebrew University in Jerusalem.

Studies show that eyes a certain shape and distance apart, nose a certain length, lips a certain curve, increase the probability that we will find one face more attractive than another.

"We were able to fit a mathematical model to this set of data that we've gathered, namely the images that we showed to people and their responses in terms of the beauty scores that they chose to give to each image," said Lischinksi.

The team then applied the model to modify images so as to make them appear more attractive. They are now exploring a variety of potential commercial applications for the software, Lischinski said.

"This is something we're looking into," he said. It remains to be seen whether women would simply use the improved image as a guide to more effective makeup application or whether people take it to a plastic surgeon and say: "Make me look like that."

The results can be striking. The photographed face of one conventionally pretty woman processed by what some Israeli media dubbed "the beauty machine" became clearly more beautiful.

Crucially, the software did not attempt to correct the very slight crookedness in her nose, so she was unmistakably the same person but subtly enhanced to great effect.

The aim is not a world "where everybody looks the same or everybody looks like a Hollywood star or a supermodel. What our programme tries to do is to improve the perceived attractiveness of the face but in a manner that tries to change it as little as possible," said the professor.

The Israeli scientists say they are well aware of the adage that "beauty is in the eye of the beholder".

"I think obviously the original faces have more. They represent the true character of that face and when we modify the image some of that character might go away. This is one possible criticism," Lischinksi said.

So far, the model simply presents the optimized version of a face which could be used as a photograph -- if the owner was prepared to disappoint in any real-life encounter.Some of those asked did

not prefer the "improved" looks of movie stars, for example. "I think a lot of it has to do with familiarity," Lischinski said.

Healing with Laser Heat Surgical lasers could soon heal cuts as well as make incisions

The promise of medical lasers goes beyond clean incisions and eye surgery: Many believe that lasers should be used not just to create wounds but to mend them too. Abraham Katzir, a physicist at Tel Aviv University, has a system that may just do the trick and is proving successful in its first human trials.

In principle, "laser-bonded" healing offers certain advantages over classic needle-and-thread sutures, including faster healing, decreased risk of infection, and less scarring. Researchers have been working toward flesh-welding lasers for more than a decade, and a number of human trials have shown promise. But what was lacking, until now, was consistency. Flesh, blood vessels, and nerves are delicate tissues that can easily be -- for lack of a better word -- overcooked.

To overcome this problem, Katzir and his colleagues developed a laser-based system with a feedback loop that prevents overheating. First, they had to determine the optimal temperature at which flesh melts but can still heal (about 65 degrees Celsius). Then the group created a pen-sized tool that incorporates optic fibers: one that channels a carbon dioxide-powered infrared laser to the wound with pinpoint precision, and another that leads from the pen to an infrared sensor, which measures the temperature and ensures that the heat remains within the ideal range, between 60 and 70 degrees. All a surgeon has to do is move the pen's tip along the cut, strengthening and sealing the weld with a solder of water-soluble protein.

While many scientists have experimented with laser-bonded healing, most have relied on visual feedback to make sure they were not over- or under-heating the wound. Too little heat results in an unclosed wound, while too much heat causes a bond that initially appears strong but that breaks down as the tissue dies off. "Our advantage is that we have developed optical fibers -- we're one of the very, very few groups in the world who have optical fibers that transmit IR radiation," Katzir says. "We measure the infrared emitted from the spot and can know the temperature exactly."

Until recently, the researchers worked to perfect their technique on pigs, whose skin is most similar to that of a person. Those studies told them that their method was sound: the laser-healed wounds were just as strong, mended faster, and resulted in less inflammation and infection than normal sutures, since a cut that's welded closed is better at keeping bacteria out.

Now, the group has finished their first clinical trial on human patients. Ten subjects underwent laparoscopic surgeries for gall bladder removals: each patient had four small incisions, two of which were closed with sutures and two with Katzir's laser technique.

"It seemed that the laser-bonded cuts healed faster and looked better," he says. The researchers are waiting to see how the two types of closures perform 12 months after surgery before publishing their results, but Katzir is optimistic and already planning the next trial, this time on hernia patients.

"It's a fabulous process, with undeniable biological advantages," says Michael Treat, a surgeon at New York Presbyterian Hospital and associate professor at Columbia University Medical Center. But rather than using lasers to replace a surgeon's needle and thread, he believes that such technology might be better used in robotic systems, in which an entire procedure is automated.

"It's cumbersome for a mechanical system to place sutures, but a laser beam is something that a computer would have an easy time controlling," says Treat, who was involved in some of the field's seminal work. And, he notes, another procedure that could benefit from laser-bonding is nerve repair, where sutures can easily leave too much scarring and rapid, ultra-fine control is essential.

One of Katzir's competitors, Irene Kochevar, is a dermatology professor at Massachusetts General Hospital and is working on her own version of laser-bonded welding, but one that takes advan-

tage of light rather than heat. “If I were to predict, I’d say that his technology and ours both lead to decreased scarring,” she says. “He’s carried the thermal approach to the highest degree of sophistication of anyone in this area.”

Katzir is already thinking beyond the next clinical trial, and believes that his method has a wide range of applications: everything from delicate surgeries on blood vessels to procedures such..

Israeli solar company 3GSolar to go public in Canada

3gsolar ceo goes public in Canada The Jerusalem, based solar company 3GSolar (formerly known as OrionSolar) is preparing go public in Canada. This would make 3GSolar the first Israeli company to ever go public in Canada.
Founded by Dr. Jonathan Goldstein, a former Luz scientist, 3GSolar technology is based on a wine-colored dye that serves as a low-cost alternative to silicon.

Cost is only one advantage to replacing silicon; another is that there may be limited quantities of silicon left, and the high-energy process of working with the substance is not necessarily “green.” Goldstein has suggested that his technology could be ideal for providing electricity to places that currently have none, such as Third World countries.

Merck- Our top three products have Israeli roots

The German company is involved with Israeli academic institutions and start-ups.
Gali Weinreb27 Nov 08 18:41
“Our three lead products have Israeli roots,” declared Dr. Karl-Ludwig Kley, chairman of German pharmaceutical company Merck KGaA (XETRA: MRK), at the annual Chief Scientist R&D conference.

Kley continued, “Rebif, our main product, originated in the Weizmann Institute. It was developed by a company jointly owned by the Institute and Serono, which was later acquired by us. Gonal-F. It enabled us to take the lead in the infertility market and is based on research conducted at Tel Hashomer. Erbitux, which is owned and marketed by ImClone, also owes part of its technology to the scientists at the Weizmann Institute. We are the international company that has paid the most royalties to Israeli scientists.”

Merck continues to operate Interpharm, the company it jointly owns with the Weizmann Institute, as its R&D facility in Israel, although Serono closed its main plant in Israel even before it was sold to Merck.

These three products have played their part in taking Merck to a market cap of $15 billion, so it is hardly any wonder that Kley enthuses about Israeli talent and is keen to expand his company’s collaborations, of which one example is the agreement it signed with the Chief Scientist in 2007.
Noting it was now a year since the signing of the agreement, Kley said that Merck was supporting five groups of scientists at the Weizmann Institute, as well collaborating with the Technion Israel Institute of Technology on cellular technology and with the Hebrew University of Jerusalem on nanomaterials. The company is also looking at 50 biomedical start-ups.

Israeli company to secure Vatican

Herzliya-based intelligent video appliances company ioimage has been selected to secure sensitive areas of the Pope’s state.
The contract includes the placement of smart cameras along a 60-kilometer (37.3 mile) perimeter of sensitive areas, including entry and exit gates and the wall surrounding the Vatican.
Sources in the security market estimate the deal to be valued at some $4-$5 million.ioimage Director Roni Kaz said, “The Vatican has the highest security demands. We got the contract after an examination that lasted three years.”
The first cameras were installed in the Vatican in 2005 as a preliminary test.
The system developed by ioimage uses smart security cameras or a box that is connected to cameras and enhances their abilities.
Each camera in the system covers a range of up to 150 meters (164 yards) and can be viewed from any computer that is connected to the internet.
“A regular camera documents what’s going on,” Kaz explained, “Our cameras have settings that spot suspicious behavior, such as an attempt to infiltrate

an off-limits area, the placing of a suspicious package, or even loitering."

ioimage employs some 70 workers in Israel and in the United States and has a market share of 37% of the global smart security camera market.

Thanks to real-time surveillance, a site that is secured with this system can cut back on the number of security guards needed.

Nonetheless, the Vatican's security guards have grown to become one of the site's attraction, due to their colorful uniforms, so it is unlikely that Israeli security cameras will replace them completely.

The IntuView Technology

IntuView's™ core product, IntuScan is a decision-support expert system for real-time exploitation of documents in Arabic and other languages. Instantly assesses any Arabic-language document, determines whether it contains content of a terrorist nature or of intelligence value, provides a first-tier Intelligence Analysis Report of the main requirement-relevant elements in the document.

Tens of millions of non-English documents are seized each year in modern warfare and specifically in the war on terrorism. The challenge currently faced by Western intelligence agencies, militaries and law enforcement officers is the inability to rapidly extract and exploit information of high intelligence value contained in such captured documentation ("Document Exploitation" or DOCEX), whilst still in the field.

The current implementations of DOCEX is time consuming and suffers from several major deficiencies: long processing times, high percentage of false negatives and false positives, loss of intelligence due to ignorance of central cultural nuances on the part of the translators or analysts.

The IntuView Solution IntuScan, is an integrated multi-engine system. It is based on: a sophisticated Arabic language NLP engine tailored to the idiosyncratic neo-classical Arabic used by Islamic terrorists; a constantly updated domain-specific (of the field of Islamic terrorism) ontology and lexicon of entities, events, expressions and hermeneutics of religious texts; an extensive rule-base for disambiguation of lexical instances; continuous statistical modeling of an extensive and eclectic training set of Islamic documents and external data bases

The purpose of IntuScan is not mere "categorization" but generation of an intelligence summary of documents or batches of documents.

This summary includes:

Characterization and prioritization of the document.

Analyses of the significance of religious terms with terrorist ramification.

Phone numbers addresses and place references.

Indirect links of the document to elements not mentioned in the document.

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