ISRAEL HIGH-TECH
& INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES JOSEPH MORGENSTERN, PUBLISHER
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Global Linkage

Some 60 years ago it took weeks and sometimes longer for events taking place at one of the world to reach the other. There was no CNN or Sky News to provide instant information. In the 18th century the Rothschild used messengers to bring news to London from a military victory that took place in Europe. The advantage of having the news ahead of others allowed the Rothschilds to make a financial coup.

However, things have changed drastically. We watch hundred thousand of Egyptians demonstrating in Tahir Square while the TV network flashes that the King of Jordan has appointed a new Prime Minister.

The rapid transfer of news has an instant knock-on effect in the world's financial markets. Though the unrest in Cairo does not have any immediate effect to what happens on Wall Street or Ahad Haam Street in Tel-Aviv, those markets experienced sell offs. Only two days later analysts began to speculate what were to happen if the Suez Capital was closed for traffic. It meant that an additional thousands of miles would be required to move sea traffic.

Israel and Egypt signed a Peace Treaty in 1979. Professor Gerald Steinberg of Bar Ilan University correctly termed it as a "cold peace" Israelis, over the years travel to Egypt for vacations. We once stayed in Eilat within seeing distance of the Egyptian-Israeli border and it was all one-way traffic to Egypt.

Israel quietly trades with Egypt. Its main import is natural gas.

Unlike other countries, Egypt has not shown any interest in Israeli high-tech.

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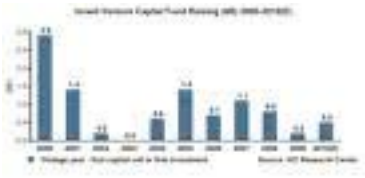
We don't believe that the changes in the Egyptian government will have any major effect on agreements previously made between the two countries.

Private equity deal value at $769 million in Q4 2010



Beresheit is most active fund in 2010

Eleven private equity deals were closed in Israel in Q4 2010, representing an aggregate deal value of $769 million. This was the highest quarterly total in the two last years, and mainly reflected Apax's buyout of Psagot Investment House for $576 million. The Q4 deal value was 165 percent higher than the $290 million of the previous quarter, when 13 deals were closed, and 590 percent above the $112 million of Q4 2009 (Figure 1) when seven deals were completed.

In all of 2010, 51 private equity deals were closed accounting for $1.58 billion, an increase of 210 percent from $513 million (38 deals) in 2009. Apax's buyout of Psagot represented 36 percent of the aggregate deal value in 2010.

In the fourth quarter of 2010, private equity deals valued at over $50 million accounted for 75 percent of total aggregated deal value; deals valued at $20 million to $50 million accounted for 22 percent; and deals valued at under $20 million accounted for the remaining 3 percent. In the third quarter of 2010, deals valued at over $50 million accounted for 63 percent of total aggregated deal value. In the fourth quarter of 2009, all deals were valued at under $50 million (Figure 2).
In 2010, deals valued at over $50 million accounted for 54 percent of total aggregated deal value; deals valued at $20 million to $50 million accounted for 32 percent; and deals valued at under $20 million accounted for the remaining 14 percent. In 2009 only one deal was valued at over $50 million, representing 15 percent of total deal value.

In Q4 2010, the financial sector was the most attractive area for private equity funds, accounting for 77 percent of total deal value. The semiconductors sector followed with 8.5 percent. In the previous quarter, cleantech attracted 41 percent of capital invested, followed by infrastructure with 26 percent, and the retail sector with 15.5 percent.
In Q4 2009, the most attractive sector was software with 47 percent of total deal value, followed by the financial sector with 24 percent and life sciences with 15 percent.
In 2010, the financial sector - the most attractive for private equity funds - represented 39 percent of total deal value. The real estate sector followed with 10 percent.

The average deal in the fourth quarter of 2010 was valued at $70 million, compared to $22 million in the previous quarter and $16 million in the fourth quarter of 2009.
In 2010, the average deal value accounted for $31 million, compared to $14 million in 2009.

Israeli Private Equity Deal Types
Three buyout deals were valued at $621 million or 81 percent of the aggregate deal value in Q4 2010, which compares with $76 million or 26 percent in Q3 2010 and $36 million or 32 percent in Q4 2009.
In 2010, 11 buyout deals accounted for $867 million or 55 percent of total deal value, compared to $173 million or 34 percent in 2009.

Seven straight equity deals accounted for $118 million or 15 percent of total deal value in Q4 2010. This compares to $149 million (nine deals) in Q3 2010, and $2 million (two deals) in Q4 2009.
In 2010, 26 straight equity deals were valued at $426 million or 27 percent, compared to 20 deals valued at $229 million or 45 percent in 2009.

One mezzanine financing accounted for $30 million or 4 percent of the aggregate deal value, compared to $50 million (one deal) or 17 percent in the previous quarter, and $30 million (one deal)

or 27 percent in Q4 2009.
In 2010, six mezzanine deals attracted $145 million or 9 percent, compared to $67 million (6 deals) or 13 percent in 2009.
No distressed debt deals were reported in Q4 2010, as in previous quarter, compared to two deals of $44 million or 39 percent in Q4 2009.
In 2010, eight distressed debt deals accounted for $139 million or 9 percent, compared to two deals valued at $44 million or 8 percent in 2009.

In 2010, the five largest Israeli private equity deals accounted for 54 percent of aggregate deal value. Apax closed a buyout of Psagot Investment House for $576 million. Tene followed with a buyout of thermostat manufacturer Fishman Thermo for $85 million. Israeli Infrastructure Fund (IIF) had the third largest deal - a buyout of toll highway operator Derech Eretz for $75 million, which was followed by Ergasol's $58 million deal with solar systems installer Inbar Solar. The next largest was FIMI's $50 million mezzanine financing of civil engineering company Tahal.

According to Rick Mann, Managing Partner of GKH, last year saw significant growth in private equity transactions reflecting increased confidence in the Israeli economy. Local Israeli funds continued to account for most of the transactions, but foreign funds are expected to play an active role going forward, particularly in the larger transactions.

Israeli Private Equity Funds Status
According to IVC online database Israeli private equity market counts 26 Israeli private equity management companies, which have total managed capital of $7 billion. Included are four Israeli PE funds that were established in the 2009-2010 period.

Israeli private equity management companies are planning to raise new funds during 2011, remarked Marianna Shapira, Research Manager at IVC. We expect capital raised for private equity investments to reach $1.5 billion, which could boost investment activity and lead to growth in both the number and size of Israeli private equity deals.

This survey reviewed the following typical types of financing deals in the Israeli private equity arena: buyouts, mezzanine, distressed debt, turnaround/ distressed equity and straight equity.

Most Active Private Equity Funds in 2010
The ranking reflects the number of deals that encompassed Israeli and Israel-related companies, and also those by Israeli private equity funds that involved foreign companies.

Beresheit Fund led the 2010 most active funds ranking with eight first investments. KCPS followed with seven first investments. FIMI had five investments, two of which were first, and the rest follow-ons. Viola shared third place with FIMI, making four first investments and one follow-on.

The real estate and communications sectors attracted the largest number of investments in 2010 – nine and eight deals or 18 and 16 percent of the total number of investments, respectively. The finance and software sectors each followed with 5 deals or 10 percent of the total number of investments.

$300m procurement deal in Israel

Intel Corporation (Nasdaq: INTC) has signed a new reciprocal procurement deal in Israel. Intel Israel general manager Maxine Fassberg signed the five-year $300 million agreement with Industrial Cooperation Authority director general Bina Bar-On.

The agreement comes after the Investment Center agreed to grant Intel $200 million for a new center at its Fab 28 in Kiyrat Gat. Bar-On will oversee Intel's reciprocal procurements in 2011-16.

Bar-On said, The great news emerging from this new agreement touches on Israeli vendors who will be recognized by giants like Intel. This announcement creates immense added value for these vendors and service provides, because it

will open doors for them all over the world.
This is Intel's third reciprocal procurement agreement with the Industrial Cooperation Authority since 1996. The Ministry of Industry, Trade and Labor says that, during this period, Intel has certified 500 Israeli vendors which service the company in Israel and internationally.

It is to Intel's credit that it has complied with all its reciprocal procurement commitments, and actually made much greater procurements beyond its commitments. Since the first agreement was signed in 1996, Intel has led in reciprocal procurement and vendor certification, making over $5 billion in procurements in Israel, said Bar-On.

NOBLE

Noble Energy to invest $650m in Israel

Noble will invest the money in offshore gas field development projects in 2011.

10 February 11 16:54, Koby Yeshayahou
In its financial report today for the fourth quarter of 2010, Noble Energy Inc. (NYSE: NBL) stated that it will invest $650 million in Israeli offshore gas field development projects in 2011.

Noble reported revenue of $783 million in the fourth quarter of 2010 compared with the analysts' consensus of $790 million.

Noble Energy owns 39.66% of the Leviathan field and 36% of the Tamar field as well as major holdings in the smaller Yam Tethys and Dalit fields.

Researchers use the common cockroach to fine-tune robots of the future

Locusts like these in Eilat, Israel, are inspiring future robotic advances. (Photo: Prof. Amir Ayali)

Ask anyone who has ever tried to squash a skittering cockroach -- they're masters of quick and precise movement. Now Tel Aviv University is using their maddening locomotive skills to improve robotic technology too.

Prof. Amir Ayali of Tel Aviv University's Department of Zoology says the study of cockroaches has already inspired advanced robotics. Robots have long been based on these six-legged houseguests, whose nervous system is relatively straightforward and easy to study. But until now, walking machines based on the cockroach's movement have been influenced by outside observations and mainly imitate the insect's appearance, not its internal mechanics.
He and his fellow researchers are delving deeper into the neurological functioning of the cockroach. This, he says, will give engineers the information they need to design robots with a more compact build and greater efficiency in terms of energy, time,

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robustness and rigidity. Such superior robotics can be even used to explore new terrain in outer space. This research was recently presented at the International Neuroethology conference in Spain as well as the Israeli Neuroscience Meeting in December.

Roach control systems as the ideal model
According to Prof. Ayali, it's clear why robotics have been inspired by these unsavory insects. A cockroach is supported by at least three legs at all times during movement, which provides great stability. Not only do cockroaches arguably exhibit one of the most stable ways to walk, called a tripod gate, he explains, but they move equally quickly on every kind of terrain. Their speed and stability is almost too good to be true.

In their lab, Prof. Ayali and his fellow researchers are conducting a number of tests to uncover the mysteries of the cockroach's nervous system, studying how sensory feedback from one leg is translated to the coordination of all the other legs. Their analysis of the contribution of each leg is shared with collaborating scientists at Princeton University, who use the information to construct models and simulations of insect locomotion.

Insects, says Prof. Ayali, utilize information from the environment around them to determine how they will move. Sensors give them data about the terrain they are encountering and how they should approach it. How this information transfers to the insect's legs is central to understanding how to mimic their locomotion.

A future army of robotic insects

Cockroaches are not the only insects that have captured scientific imagination. Projects that highlight both the flight of the locust and the crawling of the soft-bodied caterpillar are also underway.
Locusts are amazing flyers, Prof. Ayali notes. Scientists are studying both their aerodynamic build and their energy metabolism for long-distance flights. Recordings of their nervous systems and simultaneous video tracking to observe the movement of their wings during flight can be expected to lead to better technology for miniscule flying robots.
As for caterpillars, engineers are trying to recreate in soft-bodied robots what they call the creatures' endless degrees of freedom of movement. Caterpillars are not confined by a stiff structure — they have no rigid skeletons, says Prof. Ayali. This is exactly what makes them unique.

Hope for Stroke Victims

Two new studies support a novel approach based on Weizmann Institute scientists' research

Much of the devastation of stroke and head trauma is due to damage caused the overproduction of a substance in the brain called glutamate. Preventing this damage has been impossible, until now, as many drugs don't cross the so-called blood-brain barrier, and those that do often don't work as intended. But a method originally devised at the Weizmann Institute of Science may, in the future, offer a way to avert such glutamate-induced harm.
Prof. Vivian I. Teichberg of the Institute's Neurobiology Department first demonstrated a possible way around these problems in 2003. Glutamate – a short-lived neurotransmitter – is normally all but absent in brain fluids. After a stroke or injury, however, the glutamate levels in brain fluid become a flood that over-excites the cells in its path and kills them. Instead of attempting to get drugs into the brain, Teichberg had the idea that one might be able to transport glutamate from the brain to the blood using the tiny "pumps," or transporters, on the capillaries that work on differences in glutamate concentration between the two sides. Decreasing glutamate levels in blood would create a stronger impetus to pump the substance out of the brain. He thought that a naturally-occurring enzyme called glutamate-oxaloacetate transaminase (GOT, for short) could "scavenge" blood glutamate, significantly lowering its levels. By 2007,

Teichberg and his colleagues had provided clear evidence of the very strong brain neuroprotection that oxolacetate (a chemical similar to GOT) afforded rats exposed to a head trauma.
Two new studies – conducted by Fransisco Campos and others from the lab of Prof. Jose Castillo in the University of Santiago de Compostela, Spain – now provide a definitive demonstration of Teichberg's results. In the first, the scientists conclusively showed that oxoloacetate injected into rats with stroke-like brain injuries reduces glutamate levels both in the blood and in the affected brain region, while significantly lessening both cell death and the swelling that can accompany stroke. In the second, a team of neurologists in two different hospitals checked the levels of glutamate and GOT in several hundred stroke victims who were admitted to their hospitals. They found that the most significant predictor of the prognosis – how well they would recover at three months and how much brain damage they would suffer – was the levels of these two substances. High glutamate levels correlated with a poor outcome, high GOT levels with a better one.
The overall implication of these two papers is that administering GOT might improve a patient's chances of recovering, as well as speeding up the process. In addition to stroke and head trauma, a number of diseases are characterized by an accumulation of glutamate in the brain, including Alzheimer's disease, Parkinson, multiple sclerosis, epilepsy, glaucoma, certain brain tumors and amyotrophic lateral sclerosis, and there is hope that, in the future, treatments to scavenge glutamate could relieve the symptoms and improve the outcomes for a number of neurological problems. Yeda, the technology transfer arm of the Weizmann Institute, holds a patent for this method.

Low-cost, nanometer-sized drug developed by Hebrew U. and others holds promise for treatment of chronic diabetes and burn wounds

A low cost, nanometer-sized drug to treat chronic wounds, such as diabetic foot ulcers or burns, has been developed by a group of scientists from the Hebrew University of Jerusalem, Harvard Medical School and others in the U.S. and Japan.

Diabetes is a rapidly growing medical problem affecting close to 3 percent of the world's population. Poor blood circulation arising from diabetes often results in skin wounds which do not heal, causing pain, infection and at times amputation of limbs.

Several proteins, called growth factors, have been found to speed up the healing process, however purifying these growth factor proteins is very expensive, and they do not last long on the injured site.

Now, scientists at the Hebrew University and Harvard involved in the project have used genetic engineering to produce a "robotic" growth factor protein that responds to temperature. Increasing the temperature causes dozens of these proteins to fold together into a nanoparticle that is more than 200 times smaller than a single hair.

This behavior greatly simplifies protein purification, making it very inexpensive to produce. It also enables the growth factor to be confined and to remain at the burn or wound site. The scientists refer to their discovery as robotic, since just as robots are machines that respond to their environment by carrying out a specific activity, so too this protein they have developed responds and reacts to heat.

The experimental drug, which ha been developed by the research group as a topical ointment, has been patented and thus far has been used to treat chronic wounds in diabetic mice, dramatically increasing the healing rate. The goal is to proceed to human clinical trials at some future date after future tests and refinements.

An article on the project has been published online in PNAS (Proceedings of the National Academy of Sciences of the US). The authors are Dr. Yaakov Nahmias, director of the Center for Bioengineering in the Service of Humanity at the Hebrew University of Jerusalem; Dr. Zaki

Megeed, Prof. Robert Sheridan and Prof. Martin L. Yarmush of the Harvard Medical School and Shriners Hospitals for Children; Prof. Piyush Koria of the University of South Florida; and Dr. Hiroshi Yagi and Dr. Yuko Kitagawa of the Keio University School of Medicine in Japan.

New system measures customer service response time

High-tech company Tikal Networks launches unique, innovative system estimating quality of organizations' customer service centers
Ynetnews

High-tech company Tikal Networks, one of the companies leading the VOIP communications revolution in Israel, is launching a unique and innovative system that measures response times and the quality of the service in customer service centers.

The system is capable of accurately measuring response times in customer service centers in government offices and other organizations.

Tikal Networks CEO Alex Argov stated that many companies operate customer service centers. We are offering a system that simulates incoming calls for the organizations and measures response times and service quality of company employees at the customer service center .

According to Argov, the system recognizes voicemail, facsimile or human response and acts accordingly. In the case of voicemail, the system will leave a message and wait for an answer. In the case of human response, the system measures the response time and records the beginning of the call. The system then issues quality reports for the organization.

Researchers Discover Way to Reverse Immune System Aging

Researchers at the Technion-Israel Institute of Technology have discovered a way to reverse the aging process by removing old B lymphocytes (a type of white blood cell in the vertebrate immune system) from old mice, and forcing the production of young, potent cells to replace them. The findings were reported in the January 2011 issue of the scientific journal "Blood."

"As with every aging process in the body, it is generally thought that aging of the immune system – including that of the B cell population – is a progressive process that cannot be stopped and/or reversed," says lead researcher Prof. Doron Melamed of the Technion's Rappaport Faculty of Medicine. "But we have succeeded in showing that it is possible to turn back the aging process."

As is the case with the rest of the body, the immune system is weakened with age, a fact reflected by a significant increase in illness among the elderly, and a dramatic decrease in their ability to respond to vaccination. The B lymphocytes are major cellular components in the function of the immune system and are responsible for the production of antibodies.

According to Prof. Melamed, many studies have shown the B cell population undergoes dramatic changes with age as a result of a decline in the body's ability to produce new B cells and a selection process that leads to an accumulation of old B cells with a limited and reduced response capability.

Using old mice, the Technion researchers showed that active removal of the B cells changes the cellular homeostasis in the body and generates conditions of chronic deficiency of these cells. To overcome this deficiency, the body re-activates the bone marrow, forcing it to produce B cells again at a rate not different than that which exists in young mice. The researchers found that the newly generated B cells replaced the old cells that were removed, and led to an improvement of up to 400% in the ability of the treated mice to respond to vaccinations.

"This paper shows -- for the first time -- that physiological aging is a regulated process that can be

reversed, thus raising many questions concerning our understanding of the mechanisms of aging," Prof. Melamed says. "It also presents a novel approach for rejuvenating the immune system, and for enhancing the efficacy of vaccination among the elderly population, an approach that is now being studied."

The Technion-Israel Institute of Technology is Israel's leading science and technology university. Home to the country's first winners of the Nobel Prize in science, it commands a worldwide reputation for its pioneering work in nanotechnology, computer science, biotechnology, water-resource management, materials engineering, aerospace and medicine. The majority of the founders and managers of Israel's high-tech companies are alumni. Based in New York City, the American Technion Society (ATS) is the leading American organization supporting higher education in Israel, with offices around the country.

New IAI taxibot to save airlines billions

The Israel Aerospace Industries Ltd. (IAI) (TASE: ARSP.B1) passenger jet towing vehicle, capable of handling even the largest planes in service, has successful completed a series of trials. The taxibot tows planes from passenger gate to the runway, rendering it unnecessary for the planes to operate their jet engines.

IAI estimates the cost of the taxibot at $3 million, and the company expects to sell 1,500 taxibots to airlines by 2020.

At many airports, the passenger gates are several miles from the runways, and the drive to the runway consumes huge quantities of jet fuel. For example, a Boeing 747 consumes a ton of jet fuel every 17 minutes.

The good news about the taxibot is that a plane's crew does not have to use the engines to taxi from the passenger gate to the end of the runway, IAI taxibot project manager Ron Brayer said This is no small thing nowadays. Airlines will save billions of dollars on fuel. Plane safety will improve, because when the engines are off, the risk of sucking in items on the ground is reduced. In addition, noise at airports will lessen, and there will be fewer pollution emissions. In effect, the plane's crew will only have to operate the immense jet engines for less than five minutes before takeoff.

IAI says that the taxibot can tow the largest passenger jets now in service, including the Airbus 380 Superjumbo. Tests in recent months at airports in France and Germany proved that the taxibot can also tow the Boeing 747.

IAI VP business development Yehoshua Eldar said that the world's airlines spend $7-8 billion a year just on taxiing from the passenger gates to the runway. This does not even include the spending of additional hundreds of thousands of dollars on repairing breakdowns caused by accumulated engine damage from the sucking of items into the engines, he said. He predicts that taxibot sales will begin in 2012.

Sniffer mice have a nose for explosives

Is that a bomb I smell before me?
ONE day, there may be more than X-ray machines and full-body scanners awaiting you at the airport. Listen out for the snuffling of sniffer mice as you pass through security.

The critters will not be angling for a snack, though. They are part of a bomb-detecting unit created by Israeli start-up company BioExplorers, based in Herzliya, which claims that trained mice can be better than full-body scanners and intrusive pat-downs at telling a bona fide passenger from a terrorist carrying explosives.

Eran Lumbroso conceived the mouse-based explosives detector while serving as a major in the Israeli navy. Along with his brother, Alon, he founded the company and built a device that looks much like an average airport metal detector or full-body scanner.

Along one side of an archway, a detection unit

contains three concealed cartridges, each of which houses eight mice. During their 4-hour shifts in the detector, the mice mill about in a common area in each cartridge as air is passed over people paused in the archway and through the cartridge. When the mice sniff traces of any of eight key explosives in the air, they are conditioned to avoid the scent and flee to a side chamber, triggering an alarm. To avoid false positives, more than one mouse must enter the room at the same time.

It's as if they're smelling a cat and escaping, Eran says. We detect the escape. Unlike dogs, which are often trained for explosives and drugs detection, mice don't require constant interaction with their trainers or treats to keep them motivated. As a result, they can live in comfortable cages with unlimited access to food and water. Each mouse would work two 4-hour shifts a day, and would have a working life of 18 months.

What's more, mice beat dogs for olfactory talent, and by much more than a nose: dogs have 756 olfactory receptor genes, while mice have 1120, resulting in a more acute sense of smell.

Attacks such as the recent bombing of Domodedovo airport in Moscow, Russia, are fuelling interest in exploring new methods for keeping travelers safe. Low-tech alternatives may appeal to people who fear new full-body scanners are exposing them to harmful radiation and invading their privacy. Animals' noses are always a good solution, and the mice don't see you naked, says Bruce Schneier, who runs the blog Schneier on Security.

However, Schneier adds that there are drawbacks that could prevent their widespread use. For instance, their cages need regular cleaning, and new mice would have to be trained all the time because of their short working life. And while useful for explosives, they could never replace current baggage scanners and metal detectors.

Nonetheless, the company ran its first field test in December last year at Azrieli Center, a large shopping mall in Tel Aviv. More than 1000 people passed through the detector, 22 of whom were asked to hide mock explosives in pockets or under shirts. All 22 packages were detected, the Lumbrosos claim, adding that the false-alarm rate was less than 0.1 per cent.

Of moths and explosives

Moths have an exquisite sense of smell, so their ability to sniff out improvised explosive devices was recently tested by Andrew Myrick and Tom Baker at Pennsylvania State University in University Park.

The team built a detector using four live moths, which were immobilized in thin, aerated tubes.

Different chemicals produce distinct voltages on the antennae that the moths use to sense aromas, so the team wired up the moths to record these levels.

Software inferred the explosive source's direction and distance based on the strength of signals coming from the insects. The detector was then able to home in on it to within 20 centimeters from 23 meters away.

Answers.com sold for $127m cash

Answers Corporation (Nasdaq:ANSW) has agreed to be acquired by AFCV Holdings, LLC, a unit of private equity firm Summit Partners, for $127 million cash.
Answers Corporation runs web answers search engine Answers.com. It operates from Jerusalem and New York, and employs about 73 people.

AFCV will acquire all outstanding shares of Answers.com common stock, Series A convertible preferred stock and Series B convertible preferred stock.

Answers founder, chairman, and CEO Bob Rosenschein said, This is a great outcome for our

shareholders. The acquisition price of $10.50 per share represents a significant cash premium of approximately 33% over our 90-day volume-weighted average closing stock price.

The Answers Corporation board has unanimously approved the transaction, and recommends stockholders to accept it.

Microsoft Israel to recruit 100 workers for R&D

The Microsoft Israel R&D center plans to hire 100 new employees for cloud computing projects. Microsoft Israel R&D center president Moshe Lichtman made the announcement at the company's annual press conference today.

The Microsoft Israel R&D center has 600 R&D employees. Cloud computing is at the center of our vision. About 70% of the center's development activity is focused on cloud computing, Lichtman said. This year, we will complete development of the first versions of 11 products, which will be launched on the global market.

Just over a year ago, we launched a free security product. The product has had 100 million downloads in the past year, and it has the second largest share of the global market for free products. This product was developed entirely in Israel, and it will stay free, said Lichtman.

The Microsoft Israel R&D center developed technologies for Microsoft Corporation's (Nasdaq: MSFT) mobile search engine, Bing Mobile. A feature developed in Israel enables check-in via Facebook, Foursquare, and Messenger. It also makes it possible to receive memos when the user is nearing a geographical point, such a particular store.

Corning buys wireless network MobileAccess

Corning Inc. (NYSE: GLW) has acquired Israeli wireless network solutions developer MobileAccess Ltd. Corning did not disclose the terms of the agreement, but market sources put the price at $150-200 million.

Mobile Access, formerly Coxcomb Wireless, was founded in 1998 as a spin-off of OnePath, and subsequently raised $60 million. The company develops distributed antenna system (DAS) solutions for wireless telecommunications coverage inside buildings. The company's customers include AT&T Inc. (NYSE: T), Verizon Corporation (NYSE: VZ), and Deutsche Telekom AG (NYSE: DT; DAX: DTE), as well as financial and other corporations. The company reportedly had $30-40 million revenue in 2010.

MobileAccess has undergone several reincarnations, and was on the verge of closing in 2002. At that point, it underwent a facelift, turned its focus on the North American market, and outsourced the manufacture of its products.

This is the first acquisition of an Israeli company by Corning, which has a market cap of $34 billion.

MobileAccess will be integrated into Corning Cable Systems, part of Corning's telecommunications business segment. Corning manufactures specialty glass and ceramics for keystone components for consumer electronics, mobile emissions control, telecommunications and life sciences.

Beneficiaries of the acquisition include investors Genesis Partners, Pitango Venture Capital, Poalim Ventures, and Eurofund. Poalim Ventures and Eurofund do not manage active venture capital funds. Viola Private Equity was the last investor in MobileAccess, investing $8 million a year ago.

MobileAccess CEO Ron Kaiser said, Working with Corning, a world-leading optical connectivity company, provides MobileAccess with a great opportunity to extend our strong position in the growing wireless market.

Google has created the Web's largest digital

archive of Holocaust photos and documents in partnership with the Yad Vashem museum in Israel.
The collection, hosted on Yad Vashem's website, contains some 130,000 high-resolution black-and-white and sepia-toned photos as well as documents related to Holocaust victims. Texts for many of the documents were transcribed by experimental optical character recognition (OCR) and posted underneath.

You can search for names in the archive. For instance, a search for Jewish refugee Rena Weiser pulls up a link to a visa issued to her by the Consulate of Chile in France. Furthermore you can add personal stories below images in the archive.

The Yad Vashem partnership is part of our larger effort to bring important cultural and historical collections online, Google wrote in the blog post. In the past Google has digitized archives from the National Library of the Netherlands, collections at the Prado Museum in Madrid, and the LIFE photo archive.

The initiative was timed for the UN International Holocaust Remembrance Day tomorrow, Janurary 27. The day commemorates the anniversary of the Soviet liberation of the Auschwitz death camp in 1945.

Antioxidants cause fertility problems in females

Antioxidants are sold over the counter everywhere. They're added to food, drink and face cream. But according to Prof. Nava Dekel of the Biological Regulation Department, we still don't have a complete understanding of how they act in our bodies. New research by Dekel and her team, recently published in the Proceedings of the National Academy of Sciences USA (PNAS), has revealed a possible unexpected side effect of antioxidants: They might cause fertility problems in females.
Common antioxidants include vitamins C and E. These work by eliminating molecules called reactive oxygen species that are produced naturally in the body. Stress can cause these chemically active molecules to be overproduced; in large amounts they damage cells indiscriminately. By neutralizing these potentially harmful substances, antioxidants may, theoretically, improve health and slow down the aging process.
But when Dekel and her research team including her former and present Ph.D. students
Dr. Ketty Shkolnik and Ari Tadmor applied antioxidants to the ovaries of female mice, the results were surprising: ovulation levels dropped precipitously. That is, very few eggs were released from the ovarian follicles to reach the site of fertilization, compared to those in untreated ovaries.
To understand what lies behind these initial findings, the team asked whether it is possible that the process of ovulation might rely on the very "harmful" substances destroyed by antioxidants – reactive oxygen species.
Further testing in mice showed that this is, indeed, the case. In one experiment, for instance, Dekel and her team treated some ovarian follicles with luteinizing hormone, the physiological trigger for ovulation, and others with hydrogen peroxide, a reactive oxygen species. The results showed hydrogen peroxide fully mimicked the effect of the ovulation-inducing hormone. This implies that reactive oxygen species that are produced in response to luteinizing hormone serve, in turn, as mediators for this physiological stimulus leading to ovulation.
Among other things, these results help fill in a picture that has begun to emerge in recent years of fertility and conception, in which it appears that these processes share a number of common mechanisms with inflammation. It makes sense, says Dekel that substances, which prevent inflammation in other parts of the body, might also get in the way of normal ovulation and so more caution should be taken when administering such substances.

Much of Dekel's research has focused on fertility -- her previous results are already helping some women become pregnant. Ironically, the new study has implications for those seeking the opposite effect. Dekel: "On the one hand, these find-

ings could prove useful to women who are having trouble getting pregnant. On the other, further studies might show that certain antioxidants might be effective means of birth control that could be safer than today's hormone-based prevention."
Dekel and her team are now planning further studies to investigate the exact mechanics of this step in ovulation and to examine its effect on mice when administered in either food or drink. In addition, they plan to collect data on the possible link between females being administered antioxidant supplements and the difficulty to conceive.

From solar to wind energy - Israel is open to ideas
The impressive performance by Israeli companies at the Cleantech Open IDEAS competition confirms the country as a place where people are open to new ideas and thinking outside the box.

The Wind Tulip, fashioned like an environmental sculpture, is designed so that people will feel comfortable living next to a high-efficiency, clean-energy solution.

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Israeli startups Solaris Synergy and Leviathan Energy cleaned up at the Israel national Cleantech Open IDEAS competition. Held in November at Tel Aviv University's Akirov Institute for Business and Environment, the event was a feature of Global Entrepreneurship Week.

Solaris took first prize and Leviathan captured both second and third place for its innovations in solar and wind energy, respectively. Solaris went on to rank fourth in a field of national winners from 20 countries at Cleantech Open IDEAS, an international competition intended as a launching pad for novel approaches to worldwide energy, environmental and economic challenges.

Solaris

In its quest to make solar energy practical and affordable, the Solaris system overcomes two major hurdles: The large tracts of land needed for solar farms and the expense of the silicon material that converts light to electricity.

Yossi Fisher at the company's prototype Floating Concentrating Photovoltaic (F-CPV) system.

Solaris' Floating Concentrating Photovoltaic (F-CPV) system sits on water rather than on land. There is a huge amount of inland water in the world, and many confined bodies of water are located in areas with excellent solar insulation, says Fisher. The system works best in areas of strong sunlight, such as Africa, Asia, Australia, Mediterranean countries and South, Central and southern North America.

Constructed of lightweight plastic and fiberglass, the Lego-like modules fit together in grids configured to fit the shape of the host body of water - be it fresh-, salt- or wastewater. This solar-on-water platform doubles as a breathable reservoir cover that significantly reduces evaporation and eliminates harmful organic and algae growth. Each grid can generate 200 kilowatts of power.

The modules are faced with a curved mirrored film that clusters the sunlight into a thin line. Since only that five percent of the surface needs a silicon cover, Solaris uses relatively little of the costly material, explains co-founder and CEO Yossi Fisher. This has an added environmental benefit since silicon production releases contaminants into the air.

Because there is no friction between the grids and the water, it only takes one small engine to slowly rotate the grids to keep the light focused on the line of silicon material.

Israeli 2010 Cleantech Open Winner - Solaris Synergy

Showing a visitor the prototype on the roof of Solaris headquarters at Har Hotzvim Industrial

Park in Jerusalem, Fisher explains that the rotation is based on a sophisticated sun-tracking algorithm programmed into a remote controller.

The controller also moderates the direction of the rotation and the speed of the engine. A central server receives data over a cellular line from the controller via an antenna, allowing the technical crew to keep a watchful eye on how the system is functioning.

Since the mirrors generate a lot of heat, and silicon converts light into energy more efficiently at cooler temperatures, Solaris developed a patented technology that uses the water underneath the grids to keep the silicon cooler than on conventional solar panels.

We have the only cold silicon in the world and we are generating energy more than 20% more efficiently because of this, Fisher says.

The two-year-old company has a working prototype and is due to install a pilot project in 2011 under the auspices of Mekorot, Israel's water authority. Floating Solaris grids on top of Israel's more than 400 recycled wastewater reservoirs would enable the country to realize its goal of generating 10-20 percent of its energy from renewable sources by 2020, Fisher says.

A second pilot installation is planned at a reservoir near Marseilles in cooperation with France's electric company, partially funded by the joint Israel-European R&D project Eureka.

Co-founders Yossi Fisher and Dr. Yuri Kokotov in front of a computer-generated image of a Solaris Synergy installation.

Fisher hopes to be bought out eventually by a major energy firm. By definition, that will mean a company outside Israel. In Israel, we have good industrial infrastructure, brilliant people and a government that supports businesses in the R&D stages, he says. But when you pass the R&D phase you must pair with a corporate giant to be successful, and unfortunately there are few such giants in Israel.

Leviathan

Velocity is where the money is in terms of wind, says Dr. Daniel Farb, who accepted the prizes for both second and third place on behalf of Leviathan Energy. If wind going one meter per second can power one light bulb, then wind going two meters per second can power eight light bulbs.

Farb utilizes principles from computational fluid dynamics to fashion a large Wind Energizer - an airfoil structure directing wind flow to the critical area of large wind turbine blades, increasing the velocity of the wind at the point at which it hits the blades. The result is a boost in output of 20 to 40%.

There is no faster way in the world to increase the supply of renewable energy than to add [the Wind Energizer] to the 200,000 turbines already connected to the grid, he told the scientists, academicians and venture capitalists during his Cleantech IDEAS presentation.

The second winning project is the Wind Tulip, a small vertically rotating wind turbine for rooftop use that is quieter and more efficient than rooftop turbines currently in use. Integration of power from the rooftops of buildings is a major need in the world as a renewable energy with zero footprint on the earth, he says. The Wind Tulip is aesthetically pleasing and presents no danger to people or birds.

Wind tulip in Jerusalem

Both products will be cost-effective and simple to install, he says, based on studies done on prototypes at the company's demonstration wind farm at Rotem Industrial Park in Dimona. Now the challenge is to find funding to prove their effectiveness on a larger scale and commercialize them for the greater market.

Farb estimates that Leviathan needs about $3.5 million to go into mass production for the Wind Tulip, and about $1 million to implement and cer-

tify the Wind Energizer on a large scale. Inquiries have come from countries including Italy and Chile. Another company in the Leviathan group holds the patent for a hydroelectric turbine that operates in piping systems.

Doing business in Israel gives this recent immigrant from Los Angeles access to lots of different people and skill sets, says Farb.

Israeli GDP surges up OECD ranks in 2010

Economists now believe that the Bank of Israel is extremely likely to raise interest rates for March to keep a lid on inflation.
By Moti Bassok

The Israeli economy easily outstripped forecasts in last year's final quarter, achieving annualized growth of a stellar 7.8 percent. While growth rates in other developed countries range from vanishingly small to around 3 percent, Israeli gross domestic product grew 4.5 percent last year, the Central Bureau of Statistics said yesterday.

Economists now believe that the Bank of Israel is extremely likely to raise interest rates for March to keep a lid on inflation.

The pace of Israeli growth is the fifth highest among the 34 members of the Organization for Economic Cooperation and Development, which Israel joined last year. Israeli growth outstripped that of the United States, Britain, Japan, Germany, France and most other countries in the group, too. Economic growth by the OECD nations averaged 2.8 percent last year, while the average for continental Europe was even lower - a mere 1.7 percent.

In 2009, the Israeli economy had only grown by a meager 0.8 percent.

Analysts' forecasts hadn't even come close. Most thought fourth-quarter growth would be around 4 percent.

The main impetus for the fourth-quarter leap was strong growth by public consumption, which increased by 6.5 percent, a nearly 19 percent leap in investment in fixed assets, and a 7.1 percent increase in exports (mainly diamonds).

Prime Minister Benjamin Netanyahu and Finance Minister Yuval Steinitz ascribed the jump to sound economic policy, and analysts struggled to explain how they had gotten it so wrong. Just this week, the Bank of Israel itself had predicted fourth-quarter growth of between 4.3 and 4.6 percent.

Amir Kahanovich, chief economist at Clal Finance, said that at first glance, the Central Bureau of Statistics figures look like they're data for China. The figures show the strength of the Israeli business sector, he said - and also the potential for inflationary pressure.