

# ISRAEL HIGH-TECH & INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES  
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## Israel is Awarded a Nobel Prize



The Nobel Prize is the world's most prestigious prize. Among prizes awarded for science a separate peace prize is awarded. Ironically Alfred Nobel was the inventor

of dynamite. This year's prize in physics was awarded to Israel's physicist Dan Schechtman.

The Nobel Prize, award is given for outstanding achievement in physics, chemistry, physiology or medicine, peace, or literature. The awards were established by the will of Alfred Nobel, who left a fund to provide annual prizes in the five areas listed above. These prizes were first given in 1901. Each prize consists of a gold medal, a sum of money, and a diploma with the citation of award. The amount of money available for

each prize varies from year to year. The Nobel Prizes are awarded without regard to nationality; the judges are, by the terms of Nobel's will, the Royal Swedish Academy of Sciences (physics



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and chemistry, as well as economic science), the Swedish Royal Caroline Medico-Surgical Institute (physiology or medicine), the Swedish Academy (literature), and a committee elected by the Norwegian parliament (peace). The awards are made on December 10, the anniversary of Nobel's death, the Peace Prize being presented in Oslo and the others in Stockholm. A prize is sometimes shared; several times the Nobel Peace Prize has been given to an organization. There may be one or more years in which a prize or prizes may not be awarded; this has happened most often with the Peace Prize.

Shechtman experienced several years of hostility toward his non-periodic interpretation (no less a figure than Linus Pauling said "There is no such thing as quasicrystals, only quasi-scientists."). Pauling was apparently unaware of a paper in 1981 by H. Kleinert and K. Maki which had pointed out the possibility of a non-periodic Icosahedral Phase in quasicrystals (see the historical notes). The head of Shechtman's research group told him to "go back and read the textbook" and then "asked him to leave for 'bringing disgrace' on the team." Shechtman felt rejected. Later,[when?] other scientists began to confirm and accept empirical findings of the existence of quasicrystals.

The Nobel Committee at the Royal Swedish Academy of Sciences said that "his discovery was extremely controversial," but that his work "eventually forced scientists to reconsider their conception of the very nature of matter." Through Shechtman's discovery, several other groups were able to form similar quasicrystals,[when?] finding these materials to have low thermal and

electrical conductivity, while possessing high structural stability. Quasicrystals have also been found naturally.

Quasicrystalline materials could be used in a large number of applications, including the formation of durable steel used for fine instrumentation, and non-stick insulation for electrical wires and cooking equipment.

Israel is among countries who have won the most prizes per capita. Of the ten prizes won, five were in the fields of science.

### Apple to set up Israel development center

Apple Inc. (Nasdaq: AAPL) has decided to open a development center in Israel focusing on semiconductors. The decision was taken even before the company entered into talks to acquire Herzliya-based flash storage solutions provider

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Anobit Ltd..

Apple has hired Aharon Aharon, a veteran player in Israel's high tech industry, to lead the new development center.

Although Apple is a global innovation leader, the company is a relatively small investor in R&D. The producer of the iPad and iPhone invested \$2.4 billion in R&D in 2010, which was only 2% of its revenue, much less proportionately than other high-tech companies.

Apple's deployment of R&D activities is in line with this policy and the company has only one technology development center, which is at company headquarters in Cupertino, California. All activities outside of company headquarters revolve around marketing, sales and support. Strategic development is carried out at home. The planned Israel center will therefore be the company's first such center outside of its California headquarters.

Apple corporate VP R&D Ed Frank is currently visiting Israel. Frank's background is in semiconductors and he has spent most of the last decade in senior positions at Broadcom Corporation (Nasdaq: BRCM), where he has managed communications chips activities and R&D generally. Frank has been meeting with Israeli companies and high tech business people, although the purpose of the visit has probably not been to identify acquisitions.

Apple's strategy over the years has been to have full control over most of the components in its products. Apple's history with chips began in 2008 with the acquisition of P.A. Semi, which today forms the basis for all the company's computers and phones. Having control

over its chip components enables Apple to produce whatever it wants while maintaining maximum secrecy and controlling expenditure.

The company has a unique strategy that includes securing ahead of time a large volume of electronic components such as memories, communications chips, flow management and the like. Ordering in advance requires large amounts of capital but allows Apple to neutralize seasonal fluctuations in demand and to keep prices from rising. The fruits of the strategy can be seen in Apple's gross profit margin, which is 40.5% of revenue - far higher than that of other hardware companies.

This strategy is what stands behind Apple's desire to acquire Anobit, which develops systems for improving NAND flash memories. Apple spends billions of dollars annually on buying flash memories for the range of products it manufactures. Anobit's memories, which are already inside Apple's products, would result in savings of 10-20% for the computer giant in its purchases of memories. Apple's new CEO Tim Cook, who replaced the late Steve Jobs, has been stressing streamlining the supply chain; setting up an Israel development center sits well with this strategy.

### **Tegal invests in Israeli medtech start-up**

Semiconductor equipment supplier Tegal Corp. said Tuesday (Nov. 29) it made a \$300,000 strategic investment in NanoVibronix Inc., a privately held firm that develops medical devices and products that implement its proprietary therapeutic ultrasound technology.

NanoVibronix (Nesher, Israel) is a medical device company focused on creating

products utilizing its proprietary low-intensity surface acoustic wave (SAW) technology, according to Tegal. The firm is developing a series of products aimed at the treatment of chronic, non-healing wounds, Tegal said.

The company's first product, PainShield MD has been cleared the U.S. Food and Drug Administration and achieved CE Mark certification in Europe, Tegal said. PainShield MD is marketed for the treatment of tendonitis, muscle pain and trigeminal neuralgia, Tegal said.

"Our investment in NanoVibronix expands the Tegal portfolio to new markets and new commercial horizons," said Thomas Mika, Tegal's president and CEO, in a statement.

### **Protecting the coastline - from down below**

DSIT supplies one of the most comprehensive underwater defense systems available, to keep "bad guys" out of sensitive installations.

Don't be fooled by the beautiful, blue, calm waters you see when you go to the beach; the ocean is actually a dangerous place. Not because of the sharks and jellyfish; there are plenty of even more dangerous creatures trolling the seas, such as terrorists, pirates, spies, and more. At risk are harbors, ports, oil refineries, security installations, and even water desalination plants. While many of these sites operate security systems aimed at preventing unauthorized intrusion above-water, very few possess underwater surveillance systems. And Israel, with its long coastline, is no stranger to maritime terrorism. There have been more than 80 attempts to attack Israel from the sea, the worst

example occurring in 1978, when terrorists killed 37 Israelis and injured more than 70 on the Coastal Road.

DSIT of Givat Shmuel provides one of the most comprehensive systems available for protecting sensitive installations from the sea. Building on its technical and operational experience in sonar and underwater acoustic systems for naval applications, DSIT has developed an innovative, cost-effective Diver Detection Sonar (DDS) system called AquaShield, designed to protect critical coastal and offshore sites against unauthorized intrusion of divers, swimmers, SDVs (Swimmer Delivery Vehicles) and Mini Submarines.

According to the company, DSIT's sonar technology has the longest range of any system on the market, making it perfect for long distance detection and classification. When a breach is detected, an alert is reported, alerting security personnel and setting off systems to neutralize the threat. But just as important as detection is the ability to ascertain which breaches are real and which aren't—ensuring that the alert is activated only if a real threat, like a diver, as opposed to a fish, is reported. To avoid that, the DSIT system utilized powerful algorithms that ensure accurate reporting.

DSIT (now a subsidiary of a large U.S. energy company, but with all development work done in Israel) has performed dozens

of installations all over the world, and last week the company received its largest order, with a contract valued at \$12.3 million with an undisclosed Asian energy firm – the largest contract ever for an underwater security system in the oil and gas industry, the company says.

Benny Sela, DSIT's CEO, said that "DSIT's diver detection sonar systems are continuously protecting ports, naval bases, energy installations, ships, and VIP compounds around the world. However, DSIT is constantly improving its systems and developing new solutions to provide our customers with a complete package from detection and classification to response to the threat. We take considerable pride in the satisfaction and trust of our current customers. We believe this is one of the primary reasons for the increase of inquiries and requests for quotes for our underwater protection systems."

### **Microsoft purchases Israeli video search**

Microsoft has paid out nearly \$100 million on an Israel-based company called VideoSurf, TechCrunch reported yesterday. The acquisition is expected to bring more complex search capabilities to Microsoft's search engine, Bing.

VideoSurf, which was launched in 2006 by CEO Lior Delgo, Chief Scientist Achi Brandt, CTO Eitan Sharon, and COO Shai Deljo, allows users to search through a wide range of video content on websites for specific videos. The technology can "see" the individual frames inside videos, enabling fast and precise searching. Microsoft says that over time it plans to integrate the VideoSurf technology into its entertainment platform to help augment its Xbox 360 ecosystem

and evolve search and discovery of entertainment content on Xbox LIVE. (It makes even more sense when you consider that Microsoft is in the process of integrating content from video and cable providers such as Verizon, Comcast, HBO and Epix into Xbox Live.)

"VideoSurf's content analytics technology will enhance the search and discovery of entertainment content across our platform," said Alex Garden, director of Xbox LIVE for the Interactive Entertainment Business at Microsoft. "This holiday we will launch voice search across our entertainment partners on Xbox LIVE. Over time, as we integrate VideoSurf's technology into our system, we are excited about the potential to have content tagged in real time to increase the speed and relevance of the search results."

TechCrunch notes that ultimately, Microsoft could use its newly purchased VideoSurf technology for Bing's video search, making search easier across your devices. It might also ultimately allow Kinect users to search for content across multiple entertainment providers within Xbox Live and use Kinect's voice search powered by Bing.

### **Israeli start-up Takadu helps Londoners save water**

As water gushes through the labyrinthine infrastructure of the London water supply system, an ageing pipe creaks, whines noisily, and finally bursts.

Within seconds, an alert starts flashing on a remote computer in the tiny office of Takadu - an Israeli start-up in Tel Aviv.

Once picked up, the information is transmitted to Thames Water - the utility company responsible for bringing water to Londoners.

CEO Amir Peg on how Takadu works with water companies

“Almost instantly, we’re able to detect, alert, locate, and basically inform the utility that there’s something wrong,” says Amir Peleg, Takadu’s co-founder and chief executive, pointing to a computer screen.

The firm’s specialization is smart water systems.

Thanks to Takadu, as well as to other measures, Thames Water managed to achieve five annual leakage reduction targets in a row.

Last winter, it received the prestigious 2011 Tech Pioneer award at the World Economic Forum in Davos.

### **New cardiac invasive technology**

A new advanced technology has been developed for the first time worldwide, at the Invasive Cardiology Institute, headed by Prof. Ran Kornowski, at Rabin Medical Center (Beilinson and Hasharon Hospitals) where all the pertinent information collected during the catheterization procedure is sent directly to the I PAD. This new application allows for the cardiologist to see the entire catheterization process on the I PAD screen, both for utilization with the patients and the staff. Developed in conjunction with the Mckesson Company this application allows the doctor the opportunity to sit with his patient and their family, and explain the catheterization procedure in a very simple visual matter, with clear

cut high resolution imaging.

It is important to note that cardiac catheterization procedure provides pertinent significant on line information about the activities of the patients heart and the condition of the arteries which then allows the cardiologist to accurately assess the situation and carry out to best most accurate catheterization procedure necessary.

Prof. Ran Kornowski who heads the Institute of Invasive Cardiology and initiated this project: “This is only a small stone in the age of new medical technologies where now instead of just explaining the catheterization procedure to the patient and his family through words we can now use the iPad to show them visually, in a very clear and professional manner the entire medical procedure. It is a completely different and very exciting experience which truly allows for the doctor and patient to meet at eye level, while also completely protecting the privacy of the patients. It is also a very high level professional way to discuss the catheterization with other cardiologists on line around the world. I believe that this application will pave the road for the initiation of many other imaging applications which can be downloaded on to the I PAD, opening up a new wave of useful advantageous medical technologies, beneficial to both the patient and the physician, allowing for much wider worldwide cooperation.”

### **Israeli technology enables blind tin- gon a touchscreen**

Inpris, a small Israeli company from Efrat, will change the way you type on your smartphones. All you need is intuition.

Many people use smartphones these

days, but sometimes the drawback of these phones is actually their high-tech touchscreen.

Many times, routine typing on the touchscreen becomes more difficult because we have to look at the screen while typing, and also because the digital keyboard actually covers about half of the screen area.

Along came Inpris, a small family company from the community of Efrat, and took upon itself to create an alternative. The company has come up with the keyboard of the future for smartphone and tablets. The keyboard uses an intuitive way of writing based on the movements of the fingers rather than pressing a certain point on the screen.

“It’s an intuitive ergonomic keyboard,” said Inpris CEO Nissan Yaron. “Instead of the QWERTY keyboard that cuts off half of your screen and forces you to constantly look at the screen, find the characters and twist your shoulders, we tell you to sit down, relax, put your hand on the screen and just type as you wish.”

“Our keyboard is also transparent,” he added, “so if you decide to look at the screen, it doesn’t cut off the website that you’re working on.”

Yaron said that the new keyboard in essence requires the user to learn a new concept.

“I give you a default way of typing,” he said. “That’s a new language, but at any time you can change the way you type using your intuition. So study yourself, use your intuition to type on the touchscreen anyway you like, and you don’t have to use the 140-year-old QWERTY

keyboard.”

The software is in final stages of development and is expected to be launched within a few weeks. Yaron said that the software will first be available on Android-based systems, adding that the company hopes to “start a revolution in typing on touchscreen devices.”

### **New Israeli technology can detect food contamination within minutes**

Bacteria contamination is one of the biggest issues in the food industry. According to The US National Library of Medicine, in the United States alone about 48 million people get sick from contaminated food each year. The common method of testing food and beverages for harmful bacteria with the use of petri plates is cumbersome and can take up to several days, which increases the chances of infected products making their way onto the market.

An Israeli company named TA Count claims to be able to reduce this waiting time from days to a mere five minutes. Based on a discovery by microbiologist Dr. Vladimir Glukhman, TA Count has found a way to determine in a matter of minutes whether or not a particular microorganism is present.

“This is the same principle as the pregnancy test,” CEO Isak Duenyas told NoCamels. “The process of identifying all the bacteria present takes a little more time, but within five minutes we can give the important answer – ‘can this be consumed or not?’”

TA Count’s founders; Glukhman, Duenyas and Dr. Elon Kaplan, all worked together at a company creating water

purification systems. They got frustrated with the length of time it took for the test results for water purity to get back. So Glukhman set out to research a solution.

The trio established TA Count in 2009 through Kinrot Ventures, an Israeli incubator promoting water technologies and received funding from Hutchison Water Corporation.

“Today the system still requires a microbiologist, but our future goal is to enable the system to work automatically with no human intervention,” Duenyas says. “For example today in Tel Aviv there is a municipal tester who has to visit 54 different places. If he had this system in the back of his car while driving from one place to another he would already get the test results and pass them to the authorities quickly. Instead of taking the sample to the lab we hope to bring the lab to the sample.”

TA Count currently only tests water and plans eventually to expand to food and even pharmaceuticals.

Israel: 300 tons tomatoes per hectare

How can vegetable farmers in a desert produce 300 tons of tomatoes in one year per hectare? They don't have fertile soil and they have only little water, yet the Israeli farmers in Arava, the southernmost part of the Negev desert in Israel, are producing just that. The amazing feat is the result of technology developed through sustained innovative research and development program, plus an active extension service that keeps the farmers abreast of the latest developments in farming. The Arava area is sparsely populated. There are only about 600 families in eight settlements consisting of about 3,000 people.

Yet, they are able to produce about 150,000 tons of vegetables a year in greenhouses. Most of the vegetables are exported to Europe and elsewhere, accounting for about 60 percent of the total vegetable export of Israel.

Israel is considered the pioneer in drip irrigation. The biggest drip irrigation company in the world is the Netafim, followed by Jain Irrigation Systems in India, which incidentally has recently acquired another company in Israel, now known as NaandanJain. In fertigation, the exact amount of water and fertilizer is supplied to the plants. This has several advantages. One is that there is economy in the use of water and fertilizer. Fertigated crops are earlier-maturing. The harvest is higher, and is of better quality. Fruits are usually sweeter. Genetics is also very important. Plant breeders in Israel are continually developing new varieties that suit the growing conditions in Israel. These include crops that are not only high yielding but are also resistant to pests and diseases, tolerant to drought conditions and the like. Crops are not the only products grown in the Arava area.

### **12,000 liters milk per cow!**

High-tech agriculture in Israel is producing record yields in both animal and field crops. And in the case of dairy cattle, they also have the highest production in the world – some 12,000 liters of milk per cow per lactation of 305 to 310 days. That's 40 liters of milk per cow per day.

In comparison, the Philippine dairy farmer is making just about 10 liters a day per animal. A former senator who has a dairy farm in Laguna says they are getting an average of 9.7 liters per day per cow.

There are a number of reasons why milk yield is high in Israel. One is superior genetics. The Israelis have developed their own Israeli Holstein which is claimed to be adaptable to harsh and varied climatic conditions. Most of the cows are inseminated artificially with semen from proven sires.

Research in feeding and nutrition is contributing to the economical production of milk. Dairy cows are raised in confinement and are fed a diet based on a total mixed ration (TMR). The milk cow's TMR contains around 33 to 35 percent of forages (dry matter basis, mainly wheat silage). The remainder, 63 to 65 percent, is concentrates (grains and meals) and byproducts. The fact that the diet of Israeli cows contains relatively high percentage of agricultural and industrial byproducts lowers feeding costs. At the same time this reduces environmental contamination.

At a kibbutz there is a wide planting of wheat. We were told that it was planted not for the grains but for silage for cows.

Advanced technologies developed in Israel are also making a big impact on the efficiency of dairy farming in the country. One example is a flow meter which is attached to the milking equipment. This automatically measures the milk flow and milking duration. It is also used as a means for early detection of mastitis and udder infection.

Another is a tag containing an "activity meter" which is used to identify the cow and transmit the information to the computer regarding the cow's general activity, detecting the sick cows as well as those that are in heat and that need to be inseminated immediately.

Other recently developed tags can detect daily rumination-duration and lying duration, supplying information about a cow's nutritional and welfare status.

According to the Ministry of Agriculture and Rural Development, linear programming software developed in Israel assists in formulating the lowest cost rations for optimized feeding and production programs. A feed controller is a mobile unit attached to the mixing wagon which stores group-feeding data, and downloads it to the main computer. Data are interlinked with the herd management software to generate intake reports per head or group.

Also, cooling systems developed in Israel and based on Israeli-made equipment, are used in most dairy herds to help maintain relatively high production and fertility levels in summer, and reduce production seasonality.

Israel produces enough milk for its growing population. It could produce much more than its present production but dairy farming is regulated by means of production quotas. These quotas are set by the Dairy Board and prices are controlled by the government. According to special government regulations, no dairy farm may produce or market unprocessed milk.

This procedure helps to maintain the balance between supply and demand in the sector, while allowing continued growth and reasonable profitability.

Milk consumption in Israel has increased tremendously since the country was established in 1948. In 1950, milk consumption in Israel was about 90 million liters. By 2008, total milk consumption

reached 1,280 million liters. Each Israeli, man, woman and child, now consumes an average of 180 liters per year. That's about half liter a day.

Milk produced in Israel is made into many processed products. After milking, the milk undergoes a laboratory and quality test. It then continues through the pasteurization process, after which it can be manufactured into butter, yoghurt, cheese or other dairy products through totally automated systems. There's a wide range of over 1,000 dairy products.

At the Afikim (Afirmilk) dairy farm, the milking cows are really pampered. They are given feed throughout the day and are milked three times daily. The animals feed in a lower portion at the edge of the house where they also defecate. Each day, a contractor who brings it to a biogas company collects the manure. Afikim pays the manure contractor \$140 per animal per year. The biogas company, on the other hand, uses the manure to generate methane gas for the generation of electricity.

Afikim's Daniel Hojman estimates that their high-milking cows eat \$8 worth of feed everyday. That's small compared to the value of the milk produced. On the average, after deducting the expenses on the non-milking animals (the replacement stocks and dry cows), the estimated profit is between 23 and 25 percent of gross revenues.

Afikim employs a user-friendly software called AfiFarm Management Program developed specifically for the dairy farm. In a herdsman's hands, AfiFarm is a powerful analysis tool used for the management of daily operations and long-term strategic planning. The program

processes automatically gathered real time data and provides a wide range of analysis reports covering all the many different factors that the herdsman must know about the herd – yield, health, fertility, nutrition and more.

Afirmilk's Rojman said that AfiFarm supports strategic decision-making by using scientific models for individual and herd milk yield prediction, planning of cow replacements and strategic planning of nutrition.

AfiFarm also supports import/export data to and from external sources and features self-diagnostic and control capabilities.

### **UK: Irrigation system scoops green award**

Israeli-developed technology tested on Staffordshire strawberry farm takes sustainability prize. A "revolutionary" irrigation and fertigation system in use at a Staffordshire strawberry grower has taken an award for its sustainable use of water and fertilizer. The AutoAgronom system, developed in Israel by the company of the same name, uses sensors in the root zone to detect plants' needs before applying water and fertilizer automatically - a method it calls capillarity control of irrigation and feeding.

Tomer Kniznik, the firm's UK representative, said: "It's a new concept which we are introducing to the market here, and we started working with several UK growers last year, including Tom Busby at Dearnside Farm." The manufacturer has claimed the system can make savings of up to 30% on water use and 70% on fertilizer. The award, presented by the Sustainable Water Industry Group (SWIG) at its inaugural event in Lon-

don's City Hall earlier this month, was an acknowledgement of the good results in water use, fertilizer use and yield experienced at the Haughton soft fruit producer, he said. "That means your return on investment is very fast."

Stem cell research leads to blood vessel to restore growth produces vessels to restore blood supply

Researchers at the Technion- Israel Institute of Technology and Rambam Medical Center in Haifa are the first in the world to create new blood vessels using embryonic stem cells that were programmed in advance.

The breakthrough cells were cultured in the lab in large amounts - enough to use them for treating cardiovascular diseases in patients.

The team was headed by Prof. Joseph Itskovitz-Eldor, head of the obstetrics/gynecology department at Rambam and the stem cell lab at the Technion's Rappaport Faculty of Medicine, together with Dr. Ayelet Dar-Vaknin. An article was published online in the journal Circulation.

The research team produced cells called pericytes, which are needed to build blood vessels and to ensure their function.

They were produced during the differentiation of embryonic stem cells using markers characteristic of cell membranes.

When they were injected into mice leg muscles whose blood vessels had been almost fully blocked, the pericytes created new blood vessels and rehabilitated the muscle cells that had been harmed by the inadequate supply of oxygen.

## **Yissum introduces a novel technology for manufacturing an anti-malaria drug in tobacco**

The work was published in the latest issue of Nature Biotechnology journal

Combating malaria is one of the eight Millennium Development Goals described in the United Nations Millennium Declaration signed by all UN members at the year 2000. A key intervention to control malaria is prompt and effective treatment with artemisinin-based combination therapies. Artemisinin is a natural compound from *Artemisia annua* (sweet wormwood) plants, but low-cost artemisinin-based drugs are lacking because of the high cost of obtaining the natural or chemically synthesized drug. Despite extensive efforts invested in the last decade in metabolic engineering of the drug in both microbial and heterologous plant systems, production of artemisinin itself was never achieved.

Now, Yissum Research Development Company of the Hebrew University of Jerusalem Ltd., the technology transfer arm of the University of Jerusalem, introduces a novel method allowing artemisinin production in a heterologous (that is, other than *A. annua*) plant system, such as tobacco. The method was developed by Professor Alexander Vainstein from the Robert H. Smith Faculty of Agriculture, Food and Environment at the Hebrew University, and sponsored by a fellowship of Mr. Isaac Kaye. It was published under the title Generation of the Potent Anti-Malarial Drug Artemisinin in Tobacco in the latest issue of the prestigious publication Nature Biotechnology.

Professor Vainstein and his graduate student Mr. Moran Farhi have developed genetically engineered tobacco plants

carrying genes encoding the entire biochemical pathway necessary for producing artemisinin. In light of tobacco's high biomass and rapid growth, this invention will enable a cheap production of large quantities of the drug, paving the way for the development of a sustainable plant-based platform for the commercial production of an anti-malarial drug. The invention is patented by Yissum, which is now seeking a partner for its further development.

Yaacov Michlin, CEO of Yissum said, "Professor Vainstein's technology provides, for the first time, the opportunity for manufacturing affordable artemisinin by using tobacco plants. We hope that this invention will eventually help control this prevalent disease, for the benefit of many millions of people around the globe, and in particular in the developing world."

About Malaria Malaria is caused by a parasite called Plasmodium, which is transmitted via mosquitoes. Symptoms of malaria include fever, headache, and vomiting, and usually appear between 10 and 15 days after the mosquito bite. If not treated, malaria can quickly become life-threatening by disrupting the blood supply to vital organs.

Over 3 billion people are at risk of malaria. Every year, this leads to about 250 million malaria cases and nearly one million deaths. People living in the poorest countries are the most vulnerable.

Malaria is especially a serious problem in Africa, where 20% of childhood deaths are due to the effects of the disease and every 30 seconds a child dies from malaria.

Israeli company launches Touchless technology

The XTR3D website introduces the technology. "Gesture control any device. Motion control any game," the website says. "XTR3D Gesture Control Interface supports gestures up to 5 meters away from the screen, in real life environment and with multiple people in front of the TV."

The Tel Aviv company just received a large investment of \$8 million. One of the big investors was U.S. company "Texas Instruments". Other companies clearly see a market in this technology after the Microsoft Kinect gaming console did extremely well despite the \$200 price tag. But don't get XTR3D confused with Microsoft's popular gaming console. Instead of using depth sensors, XTR3D uses the 2D cameras on your smartphone to create a three-dimensional effect.

"It can be installed into any consumer electronics device," XTR3D spokesperson Roy Ramati said. He adds that it will be offered at an affordable price to reach a broader amount of consumers.

You can look forward to giving your hands a rest when the technology launches in 2012.

Cornell University received \$350 million from the Atlantic Philanthropies and its Chairman Charles Feeney to support a New York City engineering campus awarded to the university.

The donation, a record for the university, was announced Dec. 16 as an anonymous gift. The identity of the donor was

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announced late last night in a statement on Atlantic's website.

Cornell and its partner Technion-Israel Institute of Technology won a New York City contest to build an engineering campus with a grant of land on Roosevelt Island and \$100 million for infrastructure improvements. The NYCTech Campus is intended to bolster job creation in the city and may generate 600 spinoff companies and \$23 billion in economic activity over the next three decades, Mayor Michael Bloomberg said at a news conference.

Cornell, based in Ithaca, New York, and Haifa-based Technion beat out six competing bids, including one from Stanford University. Cornell announced the \$350 million gift hours after Stanford said it was withdrawing from the contest.

"Of all the applications we received, Cornell and Technion's was the boldest and most ambitious," Bloomberg said. "In a word, this project will be transformative."

Feeney, 80, graduated Cornell in 1956 and co-founded Duty Free Shoppers, a retailing company. That company became the core of the Atlantic Philanthropies, Feeney's charity, which has made grants of more than \$5.5 billion since 1984.

Technion, an 87-year-old Israeli science and engineering institution with almost 13,000 students, counts Albert Einstein as an early supporter. The scientist was president of the first Technion society, according to its website. Technion professor Dan Schechtman was awarded the Nobel Prize in chemistry on Dec. 10.

"We are not going to have an extensiof

the Technion or Cornell," said Technion President Peretz Lavie. "We are going to have something new."

An engineering campus in New York will help tie Cornell more closely to the city and provide a more viable location for companies that are spun out of the school, said Ronald Ehrenberg, an economics professor who directs the Cornell Higher Education Research Institute.

"The trustees and the president have long wanted to have a bigger presence in New York City," Ehrenberg said. "The notion that you can be a great international university in the 21st century if you're located in rural upstate New York doesn't work."

Cornell's endowment was valued at \$5.3 billion as of June 30, according to the university.

Cornell counts among its alumni Sanford "Sandy" Weill, former chairman of Citigroup Inc. in New York; Abby Joseph Cohen, senior investment strategist at Goldman Sachs Group Inc. in New York, and former U.S. Attorney General Janet Reno.

### **Akamai to Acquire Contendo for \$268M**

Network solutions provider Akamai Technologies (AKAM) said it has agreed to acquire smaller rival Cotendo for \$268 million.

Akamai said the combination of its technologies and expertise with Contendo's integrated suite of Web and mobile acceleration services is expected to increase the pace of innovation in the areas of cloud and mobile optimization.

Akamai competes with companies like Level 3 Communications (LVLT) and Limelight Networks (LLNW), providing a secure platform over which businesses can engage users across Web, mobile, cloud, or a mix of private and public network environments.

The Contendo transaction is expected to close in the first half of 2012.

### **The Israeli Economy - Summary of 2011**

The Israeli economy continued to withstand the global economic crisis in 2011, which turned to be an important year for the Israeli economy also due to key socio-economic issues receiving more attention

The following article summarizes key events and developments over the last year in the Ministry of Finance and the Israeli economy, with links to further information in articles posted over the last year by the International Affairs Department in the ministry.

#### **Main Economic Indicators**

The Israeli economy continued to withstand the global economic crisis in 2011, while maintaining growth: Israel's GDP per-capita is forecasted to grow by 3% in 2011. Also, Israel managed to decrease its unemployment to an historic low level, standing at only 5.5% in the 2nd quarter of 2011, and 5.6% in the 3rd quarter of 2011.

Inflation in the last 12 months (Nov. 2011 compared to Nov. 2010) stands at 2.6%, within the target bandwidth of the Bank of Israel (1%-3%). Average monthly Consumer Price Index (where 2010=100) grew from 101.4 in Nov.

2010 to 104.1 in Oct. 2011. The Bank of Israel Interest rate grew gradually from 2% in Jan. 2011 to 3.25% in June. In between June to September, Bank of Israel interest rate was stagnant, and then was gradually decreased to 2.75% in Dec. 2011.

Both imports and exports knew a recovery in the 1st half of 2011, with a decline in the 3rd quarter. Exports of goods and services are forecasted to grow by 3.8% in 2011, and imports of goods and services are forecasted to grow by 9.2% in 2011.

Wishing our  
readers and  
friends a Happy,  
Healthy and  
Prosperous  
New Year