

ISRAEL HIGH-TECH & INVESTMENT REPORT

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Investments Continue Strong

Intel Capital has invested \$435m in 90 Israeli startups

The venture capital fund is expanding its Israel office and its pace of investment in Israeli startups.

Intel Capital today announced that it is expanding its team in Tel Aviv. Roi Bar-Kat and Noam Kaiser are joining Yair Shoham as partners and Investment Directors and Intel Capital has also promoted Adi Caspi Zepkowitz to Associate and has recruited Shira Vissoker as Business Analyst.

Shoham said, "Intel Capital is a corporate VC fund that does not 'color' the business direction of its portfolio companies. We work to help the entrepreneur succeed. To date, we invested \$435 million in Israel in 90 companies, of which 30 have matured into exits."

In 2018, Intel Capital invested \$180 million in 14 Israeli companies and plans to keep up its investment pace of the past few years.

Shoham, Intel Capital Israel investment director added, "The decision to expand our local team was driven by the importance the fund sees in Israeli entrepreneurs and innovation. Intel Capital provides unique value to entrepreneurs, including access to customers and mega-corporations across the globe, ties with other funds and a proactive and supportive approach to help our portfolio companies grow. The new Intel Capital team in Israel will invest

in companies in rounds A and above, while keeping in touch with entrepreneurs in earlier stages out of our desire to help companies find their path early on."

Shoham stressed that Intel Capital goes beyond chips and server with investments in cyber, AI, IoT, enterprise software, cloud computing, autonomous vehicles, 5G and more.



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"I believe Israel has innovation to offer in all of these areas. In the coming year, we will expand our operations in Israel."

Intel Capital announced today that it had taken part in the \$35 million financing round of Israeli startup proteanTecs, which develops solutions for the prediction of failures in electronics.

Mellanox founders' startup raises \$35m.

proteanTecs develops solutions for predicting electronics failures. Three of its four founders were also among the founders of Mellanox.

Startup company proteanTecs, among the founders of which are three of the founders of Mellanox, has announced a \$35 million series B financing round. Among the investors are Avigdor Willenz, Intel Capital, ITI Venture Capital Partners, Mitsubishi UFJ Capital, Redline Capital Management S.A., Viola Ventures, WRVI Capital, and Zeev Ventures.

The company, which up to now has operated under the radar, was founded in 2017 and employs 35 people. Among its founders Shai Cohen (CEO), Evelyn Landman (CTO) and Roni Ashuri (COO), all three of whom were also among the founders of InfiniBand and Ethernet technology company Mellanox, recently sold to Nvidia for \$6.9 billion. The fourth founder is Raanan Gewirtzman, formerly CEO of BroadLight, which was sold to Broadcom for \$230 million in 2012.

proteanTecs develops solutions for the prediction of failures in electronics. The problem that its product is intended to solve is that the more widespread the use of electronics becomes, and the more complex they become, the more their quality and reliability declines. Electronics failures can have a drastic impact, financial and other. proteanTecs' Universal Chip Telemetry is described as "a new language of inferred measurements for chip health and performance monitoring."

"We offer a one-stop cloud-based platform, that combines data derived from proprietary Agents embedded in chips, with machine learning and data analytics," Shai Cohen said. "This significantly improves chip and system production quality, while tracking operational reliability and alerting on faults before they become failures. proteanTecs provides unprecedented insights throughout the value chain, from Chip Vendors to System Vendors and Digital Service Providers."

Buffett maintains stake in Teva

Berkshire Hathaway still holds 43.2 million shares in Teva with a current value of \$778 million.

Exactly one year ago, Teva Pharmaceutical Industries Ltd.'s (NYSE: TEVA; TASE: TEVA) share price surged after it was learned that Berkshire Hathway, controlled by legendary investor Warren Buffett, had become a shareholder in the drug company. Although Buffett told CNBC two weeks later that he had not been involved in the investment, it was reported in the following quarter that Buffett's

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company had doubled its investment in Teva, and the share price shot up again.

Berkshire Hathaway slightly increased its holdings in Teva in the second quarter of 2018, but two quarters have passed since, and the fund's holdings have not changed. Late last week, a quarterly report about Berkshire Hathaway's holdings in listed companies was sent to the US Securities and Exchange Commission (SEC) showing that the fund still holds 43.2 million shares in Teva with a current value of \$778 million. Berkshire Hathaway lost \$265 million on paper on its holding in Teva during the fourth quarter of 2018.

In general, it appears that Berkshire Hathaway has profited on paper on its investment in Teva shares, although its profit is fairly small. The fund is not obligated to report at what prices it bought the shares it holds, but if the average Teva share price in each quarter in which Berkshire Hathaway bought shares in Teva is used, a total investment of \$760 million is obtained, \$18 million less than the shares' current value.

At the same time, holdings in Teva by two other investment concerns were reported last week. Capital Research, the largest shareholder in Teva with a 14.9% stake, sold some of its shares in recent months, reducing its holding to 12%, with a current value of \$2.2 billion. A new party at interest in Teva is EuroPacific Growth Fund, a US fund that makes long-term investments in shares. At the end of 2018, EuroPacific's holding in Teva was 5.1%.

Moody's retains its junk bond rating for Teva

More news concerning Teva came last week from the Moody's rating agency, which rates Teva's debt (which totaled \$28.9 billion as of the end of 2018). Moody's economists stated that they had conducted a period examination of Teva's debt, and that they had not changed their Ba2 rating - a junk bond rating.

"The rating reflects the significant size of Teva in the both the generics market and the original drugs market, plus its status as the world's largest generics company," Moody's economists write. "The debt repayment and the efforts to cut costs are helping to stabilize the business, while the company faces continued erosion of its profits due to competition with Copaxone by generic versions of the drug in the US. Moody's believes that Teva's leverage will reach a peak of 5.6 (ratio of debt to EBITDA) in 2019, before falling gradually to 4.5 in 2020."

Moody's states that there is a risk that Teva will have to spend unforeseen sums in the coming years on prolonged legal proceedings, including on matters pertaining to opioid products.

Elbit signs NIS 1b Israel defense ministry artillery deal

Fully automatic self-propelled howitzer gun systems will be delivered over 12 years as the IDF renews its artillery guns.

Elbit Systems Ltd. (Nasdaq: ESLT; TASE: ESLT) CEO Bez Halel Machlis and Israeli Ministry of Defense director general Udi Adam today signed an agreement to supply artillery guns to the IDF worth an estimated NIS 1 billion over the next 12 years.

Elbit officially announced that it has been awarded a \$125 million (NIS 460 million) contract from the Israeli Ministry of Defense to supply fully automatic self-propelled howitzer gun systems to the Israeli Defense Forces. The contract, which also includes the supply of training simulators, will be performed over a 12-year period. The ATMOS automatic howitzer guns will replace the aging M-109 artillery guns that have been serving the IDF for the past 40 years.

The company added that the Ministry of

Defense and Elbit Systems intend that further part of the automatic howitzer gun systems program, under an additional contract to the company in an amount that is expected to be material, will be performed by various US companies including Elbit Systems of America LLC, subject to completion of the receipt of applicable governmental approvals for the US content.

The new automatic howitzer gun system is based on know-how and experience the company accumulated over decades of supplying artillery systems to numerous armed forces. The new howitzer gun system is capable of automatic loading and laying. According to the applicable mission, the new gun system automatically selects the required projectile, propellant and fuse, loads them and lays the gun to optimally engage targets. The new howitzer gun system will enhance the effectiveness of the artillery formation of the IDF while reducing the number soldiers in each platform and significantly reduce life-cycle costs.

Machlis said, "This contract award is a vote of confidence in Israeli defense technology and an acknowledgment of the international leadership of Elbit Systems in the area of artillery systems. We believe that effective integration of precision, rapidity and autonomy together with a built-in connectivity to the communication and command & control systems will become the required standard. We are witnessing a growing need for advanced and reliable artillery systems that enable powerful and efficient operation in all combat configurations."

Israel's Space Program

Less than a dozen years ago, Israel became the eighth country in the world to build its own satellite and launch it with its own launcher. Since then, local universities, research institutes and private industry, backed by the

Israel Space Agency, have made giant strides in the world's final frontier.

Beginnings

On September 19, 1988, Israel launched its first satellite, Ofeq-1, using an Israeli-built Shavit three-stage launch vehicle. By independently building and launching its own satellite, Israel joined an exclusive club, which includes the United States, Russia, England, Japan, India, France and China.

At the time, the launching was the high point of a process that had begun in 1983, with the establishment of the Israel Space Agency under the aegis of the Ministry of Science. Space research by university-based scientists had already begun in the 1960s, providing a ready-made pool of experts for Israel's entry into the space age. The agency's role: to support private and academic space projects, coordinate their efforts, initiate and develop international relations and projects, head integrative projects involving different bodies, and create public awareness for the importance of space development.

The Driving Force

But Ofeq-1 could not have gotten off the ground without the earlier and simultaneous hi-tech developments in electronics, computers, electro-optics, and imaging techniques. The main contribution has been in the field of miniaturization, where Israeli engineers have made great progress. Lighter satellites are more efficient and save hundreds of thousands of dollars per launching. Thanks to the advances made by their colleagues in other fields, all the satellites produced by Israeli space scientists are noted for their light weight and small size.

Space-Based Research

Nevertheless, it is only in the past decade-and-

a-half that the importance of space research has been recognized. Nowadays, satellites are essential, among other things, for state-of-the-art media and telephone communications, meteorological forecasting, and air, sea and land navigation. Space activity has also been instrumental in other fields, including desert research, medicine, crystal cultivation and miniaturized computers. For example, studies on the development of osteoporosis are much speedier in micro-gravitational environment than on the earth's surface. Processes that take as much as 10 years on earth can take six months in space. Space conditions also allow for the creation of perfect crystals, which are used in the electronics and medical fields. The study of fuel combustion is also more efficient in a non-gravitational environment.

Furthermore, because of the need to miniaturize the size of satellite technology, NASA, the US space agency, has developed computers much smaller than the large machinery originally in use. The new components paved the way for the development of small, portable computers and other small systems.

The Commercial Space Arena

Since the launching of that first satellite, Israel has developed into a significant player in the commercial space arena. In 1989, it launched Ofeq-2; in April 1995, it took a leap forward with the launch of Ofeq-3, which carried an advanced electro-optical payload built by Israeli industry for local purposes.

Ofeq-3 has been functioning without a hitch. Following a setback with Ofeq-4, Ofeq-5 was successfully launched in May 2002.

On May 16, 1996, a French-built vehicle launched the commercial satellite Amos, developed by the Israel Aircraft Industries, into the sky.

The Amos is distinguished for its light weight and sophisticated technology.

Israel is also actively involved in the TAUVEK (Tel Aviv University Ultra Violet Explorer), developed by an Israeli hi-tech firm. TAUVEK is a cluster of three ultra-violet telescopes funded by the Israel Space Agency. It is due to be launched by Russia as part of a space observatory carrying advanced instruments from a number of countries.

Other local projects include the Techsat, a satellite developed by the Technion, and the pending manufacture of the David, a commercial remote sensing satellite developed jointly by an Israeli hi-tech company and a German firm. Tel Aviv University is conducting research based on G.P.S.T. (global positioning system technology); Ben-Gurion University of the Negev is at work along with a private company on desert research and ground humidity; and Bar-Ilan University makes use of imaging techniques to seek surface saline concentrations.

International Cooperation

Within two years, Israel may also have its first astronaut. The government is examining the possibility of conducting a scientific experiment under the auspices of the Israel Space Agency and with the help of NASA. The astronaut has already been chosen, but his name is still being kept under wraps. Israel has made big enough strides to have been accepted into the international community of space researchers, and it has formal space research cooperation agreements with the US, France, Germany, Russia and Holland. The projects that these agreements have yielded will enable Israel to maintain its place in the vanguard of space research in the years to come.

Elbit US unit buys Harris Night Vision for \$350m

Harris Night Vision develops, produces and supplies night vision technology for the US and allied military and security forces.

Elbit Systems Ltd.

(Nasdaq: ESLT; TASE: ESLT) announced today that its US subsidiary Elbit Systems of America, LLC has signed an agreement with Harris Corp. (NYSE: HRS) for the acquisition of Harris' Night Vision business for a purchase \$350 million.

The deal is contingent on the completion of Harris's proposed merger with L3 Technologies, Inc. (NYSE: LLL), as well as customary closing conditions, including receipt of regulatory approvals.

Headquartered in Roanoke, Virginia, Harris Night Vision develops, produces and supplies night vision technology for the U.S. and allied military and security forces and for the federal homeland security market.

Elbit Systems president & CEO Bezhael Machlis said, "The market position and technological strength of Harris Night Vision make this acquisition significant to our long-term growth strategy, with a particular focus on the US. Elbit Systems of America has a proven track record of providing high performance solutions and support services to the US defense and homeland security markets. We believe that the completion of this acquisition will be beneficial both for Elbit Systems and for Harris Night Vision's employees and customers."

Symantec buys Israeli cybersecurity co Luminate for \$200m

The Tel Aviv-based company has pioneered software defined perimeter technology, which will enhance Symantec's cyber defense platform.

US cybersecurity company Symantec Corp. (NASDAQ: SYMC) announced the acquisition of Israeli SaaS security platform developer Luminate Security. No financial details were disclosed but sources close to the deal

estimate that it was for about \$200 million.

With offices in Tel Aviv and Palo Alto, Luminate Security was founded in January 2017 by CEO Ofer Smadari, CTO Leonid Belkind and CPO Eldad Livni. The company raised \$14 million last year from US Venture Partners (USVP), Aleph Venture Capital and the Microsoft Accelerator.

Luminate has pioneered software defined perimeter technology. Symantec said that Luminate's Secure Access Cloud technology will further extend the power of its Integrated Cyber Defense Platform to users, as they access workloads and applications, regardless of where those workloads are deployed, or what infrastructure they are accessed through.

Symantec president and CEO Greg Clark said, "Now and in the future, we anticipate more and more corporations will operate their business on infrastructure that is managed by multiple third parties such as Azure, AWS and Google. In this rapidly evolving world, trust in external infrastructure must be carefully considered as corporations can outsource infrastructure but must also remain responsible for data and users.

Luminate incorporated into Symantec's Integrated Cyber Defense puts us at the forefront of security in the cloud era. Secure and private access is a cornerstone of cyber defense. We are excited to partner with the Luminate team and look forward to rapid delivery of this unique capability to our customers and continuing to provide quantifiable value to their cloud journey."

"As a partner, our integrations with Symantec were successful in reducing complexity and increasing security for joint customers. With this next step, we look forward to fully integrating across the entire portfolio and delivering even more innovation to offer complete security for the Cloud Generation," said Ofer Smadari, CEO, Luminate Security.

In the past two years alone, Symantec has acquired three Israeli cybersecurity companies - Javelin Networks for \$30 million, Skycure for \$250 million, and Fireglass for \$250 million.

Israeli startups raised \$750m in April

Startups have raised \$2.3 billion in the first four months of 2019, well on course to beat the record \$6.4 billion raised by startups in 2018.

Israeli startups raised nearly \$750 million during April, according to press releases issued by companies that have completed financing rounds. This is a particularly impressive amount considering that the country shut down for the Passover holiday in the second half of April. The figure may be more as some companies prefer not to publicize the investments they have received. After raising \$1.55 billion in the first quarter of the year, according to IVC, Israeli startups have now raised \$2.3 billion in the first four months of 2019.

This figure is well on course to beat last year's record startup fund raising, when according to IVC-ZAG, Israeli startups raised \$6.4 billion, up from \$5.24 billion in 2017.

As usual, most of the money raised last month, was in large financing rounds by a small number of companies. Nearly \$600 million was raised by just nine companies.

In April, online insurance company Lemonade led with a whopping \$300 million financing round. Security platform Armis raised \$65 million and cybersecurity company Aqua Sec raised \$62 million. Chip health company Proteantecs raised \$35 million, IoT security company VDOO raised \$32 million, digital health company AIDoc raised \$27 million, events cloud company Bizzabo raised \$27 million, fintech company Pagaya raised \$25 million and media reader engagement platform Spot.IM raised \$25 million.

IDF unveils electro-optic sight to intercept incendiary balloons

A smart electro-optic sight on assault rifles makes it possible to follow moving targets such as incendiary balloons and kites and hit them accurately.

The IDF has completed development of new capabilities for intercepting incendiary balloons and kites that is likely to help prevent attacks against Jewish communities bordering the Gaza Strip.

"We have attained the ability to intercept kites, and we also have very good capabilities for the threat of incendiary balloons. We have several interception methods, some in the very basic development stages, others already for immediate use in accordance with the operational field needs of the Gaza division," said Col. Nadav Livne, the commander of the Israeli army's Matmon unit -dedicated to technology R&D for IDF ground forces.

The IDF's new capabilities against the threat from incendiary and explosive balloons and kites are based on a smart rifle sight called Pегion (dagger) developed by a company named Smart Shooter from Kibbutz Yagur in cooperation with the Administration for the Development of Weapons and Technological Infrastructure in the Ministry of Defense.

The sight improves fire from assault rifles carried by soldiers that make it possible to accurately strike targets moving at high speed. Such accuracy was unavailable until recently, because the sights previously mounted on weapons did not guarantee such accuracy against moving targets or in shooting at stationary targets following great physical effort.

The Pегion sight is an electro-optic system that makes it possible to follow a moving target in various scenarios, such as in the case of

balloons and kites carrying explosives or incendiaries into Israeli territory. Based on the rapid mathematical calculations that it performs through computer software, it determines when the weapon on which it is mounted should shoot at the target, so that the first bullet fired at the target will strike it accurately.

The system is built so that as soon as it is operated, it will not allow the soldier pulling the trigger to shoot at all at a target if it does not identify an accurate hit. Pegasus is designed to hit targets at a range of hundreds of meters, with an emphasis on reducing potential damage to bystanders in urban warfare. Smart Shoot is currently developing a new and more advanced version that is believed to be lighter.

The IDF and the Ministry of Defense were enthusiastic about the new sight long before they had to face the problem of balloons and kites from the Gaza Strip. They installed it among combat soldiers in the Golan, Paratrooper, and Givati Brigades in a pilot that tested its capabilities in the field. The pilot was successful, and the Ministry of Defense ordered thousands of such sights from Smart Shooter in recent months. The volume of the deal was not disclosed.

The problem of explosive and incendiary kites and balloons began to concern the IDF last summer, after fires were caused daily in the communities bordering the Gaza Strip. Dozens of acres of agricultural land and natural groves were burned, and the Ministry of Defense was helpless against this growing threat. The threat later expanded after explosives were also attached to the balloons and kites.

The IDF deployed forces at many points along the Gazan border, and operated high-speed drones in an attempt to reduce the threat and trap the balloons and kites on their way to Israel. The drones, some of which are capable of traveling at up to 150 kilometers an hour and

are highly resistant, hit hundreds of kites and balloons, thereby preventing many fires in the area around the Gaza Strip. Nevertheless, these achievements were a drop in the ocean of the large numbers of kites and balloons launched against Israel at all hours of the day and night.

"There is no hermetic solution," Livne said. "There is always a learning competition between us and the enemy that includes assessment of the capabilities the other side, which is sophisticated, and learns quickly. Our job is to bring relevant technology as a solution."

According to Livne, additional new capabilities that will improve the IDF's ability to cope with the threat of balloons and kites will soon be included in regular defense activity in the area. He declined to provide details about the future developments, which among other things include the ability to track the place where balloons and kites land, making it possible to reach them and neutralize the explosives that they carry.

Livne says that additional innovative methods will be put into the field that will make it easier for IDF forces to cope with the weekly riots at the various friction points along the Gaza border. These events feature thousands of rioters gathering close to the fence, burning tires and trying to damage IDF defense infrastructure in the area. "The enemy's change in tactics and innovation requires us to bring new solutions to the field. The task of tracking a kite or balloon, whether it is in the sky or has already landed, requires a great many technologies that have to be combined and made operational," Livne said.

McDonald's buys Israeli AI co Dynamic Yield for \$300m

The US fast food giant says it will utilize the Tel Aviv based company's decision technology

to provide an even more personalized customer experience.

US fast food giant McDonald's Corporation (NYSE: MCD) has announced an agreement to acquire Israeli AI startup Dynamic Yield, which develops personalization and decision logic technology. No financial details were disclosed but the "Wall Street Journal" and "Techcrunch" both said that McDonald's is paying over \$300 million, its largest acquisition in the past 20 years.

McDonald's said that it will utilize the Tel Aviv based company's decision technology to provide an even more personalized customer experience by varying outdoor digital Drive Thru menu displays to show food based on time of day, weather, current restaurant traffic and trending menu items. The decision technology, McDonald's added, can also instantly suggest and display additional items to a customer's order based on their current selections.

Dynamic Yield was founded in 2011 by CEO Liad Agmon and CTO Omri Mendellevich and raised \$32 million last August, bringing the total funds raised to \$83 million, according to Crunchbase. Investors include Bessamer Ventures, Innovation Endeavors, Vertex, Marker LLC, ClalTech - Access Industries investment arm in Israeli technology, and others. The company has 200 employees, most of them in its Tel Aviv development center as well as development, sales and operations staff in its New York office.

Agmon said, "We started Dynamic Yield seven years ago with the premise that customer-centric brands must make personalization a core activity. We're thrilled to be joining an iconic global brand such as McDonald's and are excited to innovate in ways that have a real impact on people's daily lives."

McDonald's said that Dynamic Yield would

remain an independent company and that it would continue to invest in it.

"Technology is a critical element of our Velocity Growth Plan, enhancing the experience for our customers by providing greater convenience on their terms," said Steve Easterbrook, President and Chief Executive Officer, McDonald's Corporation. "With this acquisition, we're expanding both our ability to increase the role technology and data will play in our future and the speed with which we'll be able to implement our vision of creating more personalized experiences for our customers."

Israeli startups raised \$450m in March

Startups have raised \$1.45 billion in the first three months of 2019, below the pace of the record \$6.4 billion raised by startups in 2018.

Israeli startups raised over \$450 million during March, according to press releases issued by companies that have completed financing rounds. The figure may be more as some companies prefer not to publicize the investments they have received. After raising \$1 billion in January and February, Israeli startups have now raised \$1.45 billion in the first three months of 2019.

This figure is below the pace for 2018, when according to IVC-ZAG, Israeli startups raised a record \$6.4 billion, up from \$5.24 billion in 2017. According to IVC-ZAG, Israeli startups raised \$1.52 billion in the first three months of 2018.

As usual, most of the money raised last month, was in large financing rounds by a small number of companies. \$280 million was raised by just five companies.

Car laser sensor company Innoviz led with a \$132 million financing round. Cloud scale data center developer Lightbits Labs raised

\$50 million, short term property rental platform Guesty raised \$35 million, migraine device developer Theranica raised \$35 million, and freelancer platform Honeybook raised \$28 million.



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