ISRAEL HIGH·TECH & INVESTMENT REPORT

30 YEARS with the MAC

http://ishitech.co.il

WE ARE COMPLETING OUR 30TH YEAR OF PUBLICATION. WE NOTE THAT IT ALSO MARKS 30 YEARS OF USING THE MAC.

ON PAGE 7 OF THIS MONTH'S REPORT WE PUBLISH AN ARTICLE OF HOW WE BEGAN USING THE MAC. IT HAS BEEN A WONDERFUL VOYAGE AND WE HAVE TRIED TO ADAPT ALL INNOVATIONS COMING OUT OF APPLE.

WE NOW OWN THREE MACS- A LAPTOP AND TWO TABLE TOPS.

ALONG THE WAY OUR REPORT HAS BEEN READ BY AN ILLUSTRIOUS GROUP OF SUBSCRIBERS.

WE HOPE TO CONTINUE OUR PUBLICATION INTO THE FORESEEABLE FUTURE.

On January 24, 1984, Steve Jobs triumphantly stood on a stage and introduced the Macintosh computer. Word of the Macintosh spread rapidly and soon reached Tel Aviv. I went to the local computer store and was told that the Macintosh would be available only in the United States.
Few knew that some months earlier, I had been commissioned to undertake a study on the possibility of selling Apple products in Israel. It was obvious to me that Israelis would buy the new computer.
Since the time that I had published articles as a youngster, it had been clear to me that someday I would have my own newspaper. Sensing an opportunity, I flew to New York. At an Apple store, I was told about Maggie, the first Macintosh expert. Maggie had a small studio on 45th street, just off Madison Avenue. From behind a locked door, Maggie questioned me. I told her about my dream to publish a newspaper. Mag-

gie let me in. She was a massive person and told me that she had been employed by Xerox but saw her future with Apple.

She told me where to buy a Mac and acquire a program for creating a layout for a newspaper. "Go to Rosenberg in the printer's district," Maggie instructed. And that is how I got to Rosenberg. He had once been a printer, but his son had devised a program for the Macintosh. Rosenberg helped his son, and together with his non-Jewish son-in-law, they had developed a program called "Ready, Set, Go!" - a software package for Macintosh computers. Rosenberg quoted $125 for the program. I told him that I was from Israel and the sum was excessive. We settled for $100.

Back home, setting up was easier said than done. Eventually, a youngster learned to use "Ready, Set, Go!" That marked the beginning of my career in publishing a newsletter. "Ready, Set, Go!" was followed by "Quark Express", which in turn was followed by "InDesign", the program commonly used by myself today.

In the party at interest deal, ADAMA Agricultural Solutions will gain a major foothold in the Chinese market.

Agrochemicals company Adama Agricultural Solutions Ltd. (formerly Makhteshim Agan Industries) is acquiring Chinese businesses for $300 million and assuming a further $323 million in debt. In a party at interest deal, China National Agrochemical Corporation (CNAC), a strategic business unit of China National Chemical Corporation (ChemChina) and Adama's parent company, will sell the companies, which 2013 sales of a $850m.

Adama files for $300m New York offering

Once finalized, the acquisition is expected to raise ADAMA's revenue to close to $4 billion annually and give the company a major foothold in the Chinese market. Adama expects to close the transaction during the first half of 2015.

Adama Chairman Yang Xingqiang said, "We believe there is remarkable potential emanating from the combination between Adama and the Chinese businesses it is acquiring. These businesses are key players in the Chinese agrochemical industry, and we believe they will provide Adama with a significant foundation for a leading commercial and operational platform in China."

Adama President and CEO Chen Lichtenstein said, "This is the most significant milestone in the evolution of Adama's six-decade history, and in our partnership with ChemChina. The signing of the agreement with CNAC is a first step towards the creation of the only truly integrated China-Global player in the crop protection industry. "

Through the acquisition, Adama will acquire 100% of each of Jiangsu Anpon, Jiangsu Maidao, Jiangsu Huaihe (collectively called the Huai'an Hub) and Jingzhou Sanonda Holdings

(Sanonda Holdings), for a cash consideration of approximately $323m, together with assumed net debt of approximately $300m. The Huai'an Hub is based in the vicinity of Huai'an City in Jiangsu Province, the heart of the agrochemical industry in China. Sanonda Holdings owns a 20% stake in Hubei Sanonda Ltd. (Sanonda) a company publicly traded on the Shenzhen Stock Exchange, and its acquisition by Adama will increase Adama's existing stake in Sanonda from 11% to 31%, with Adama thereby becoming the single largest shareholder in the compan Israeli Wall Street IPOs surpass $3.5b in 2014

2014 is shaping up to be a record year for the raising of capital says Hapoalim high tech head Yossi Vinitski.

The successful IPO of CyberArk Software Ltd. (Nasdaq:CYBR) on the eve of Rosh Hashana and the subsequent impressive rally in the share price follows a series of IPOs by Israeli high-tech companies, which exploited this year's window of opportunity in London and New York's primary market. So far in 2014, Israeli companies have raised $3.5 billion on the US capital market. 2014 is shaping up to be a record year for the raising of capital.

A deeper examination shows that that the offerings are shared by veteran and mature companies with substantial sales, like Varonis Systems Inc. (Nasdaq: VRNS),Mobileye (NYSE: MBLY), Borderfree Inc. (Nasdaq: BRDR) and CyberArk, and biotech companies such as Bio-Blast Pharma Ltd. (Nasdaq:ORPN) and Macrocure Ltd. (Nasdaq:MCUR), which mainly raised capital in order to finance their drug development and testing programs. In either case, the capital raised will enable these companies to try and realize their potential and serve as a safety cushion to overcome obstacles and dry periods that will come in the primary market.

The high-tech companies' private placement front from funds, investment companies, and angel investors also boomed, comparable to the records posted in 2000.

The rate of founding of new start-ups has been stable. The number of visiting foreign delegations, which slowed during Operation Protective Edge, quickly picked up to its normal level, demonstrating the high interest in Israeli innovation. The innovation and sale of high-tech companies is based on a uniquely supportive environment of academe, military units, the Office of the Chief Scientist, foreign corporations' development centers, services providers, and more. This unique environment, the ecosystem in which high-tech companies grow and operate, exists in only a few places in the world.

As a venture capitalist, I have seen the reduction in services providers over the years, including accounting and law firms, which focus on high tech. These firms learned the unique needs of their high-tech clients and developed suitable programs that were specially priced to the payment capabilities of these clients at the different stages of their business. The foundation of this policy was a differentiated and focused service provided by an "expert service provider", who spoke the language of high-tech, "while foregoing small immediate profits in favor of the chance of large future profits."

It seems that the banking system, which always served high-tech companies, has lagged behind and has not made the necessary adjustments. In the past year, the banks have changed direction to reach the companies' level. In the past few years, Bank Hapoalim (TASE: POLI) has been applying a strategy to deepen activity in high tech through its fintech initiative to foster financial technology companies and partnerships with the Microsoft Corporation (Nasdaq: MSFT) accelerator.

Bank Hapoalim is now expanding its services

for high-tech customers with special tools customized to their needs. These changes will improve these companies' work, enabling to focus more on their development and marketing challenges.

Rosh Hashana 5775, the Jewish New Year in September 2014, shows promise with pending IPOs, acquisitions, and investments in the fourth quarter of the year. These will boost the companies' capital, and facilitate fundraising by investment institutions, which are showing better returns than last year, enabling them to continue expanding the industry over the coming year

Pulse Secure acquires MobileSpaces for $100m deal merger picture:
I
MobileSpaces BYOD solution makes it possible to separate personal and organizational information.

Israeli cyber security company MobileSpaces has been acquired by California-based company Pulse Secure for an estimated $100 million. According to IVC data, MobileSpaces, which was founded as CellSec in 2011, has raised $12 million in two financing rounds. The big beneficiary is Accel Partners, which invested in the company in both rounds, and the Marker LLC fund is another. MobileSpaces currently has 20 employees in Petah Tikva and Silver Spring in the US, who are expected to join Pulse Secure.

MobileSpaces is developing a solution to help organizations deal with employees who bring a laptop computer, smartphone or tablet from home, a category referred to as BYOD (bring your own device). The solution enables organizations to guard sensitive information kept on the employees mobile devices. The growing use of smartphones and tablets is liable to cause significant leaks of information from the mobile devices, with the organization having no chance to close the breach.

MobileSpaces' solution, which can be run on any mobile device, makes it possible to separate personal and organizational information. In this situation, an employee who wants access to the organization's information will have to work through a defensive wall protected by a password. The company was founded by CEO David Goldschlag, formerly VP of Mobile at global security company McAfee, and CTO Yoav Weiss, one of the first employees at Israeli security giant Check Point Software Technologies Ltd. (Nasdaq: CHKP). The company's solution can be run on devices based on either Google's Android operating system or Apple's iOS operating system.

The acquisition of MobileSpaces is Pulse Secure's first significant acquisition in the mobile devices market. MobileSpaces' technology will be combined with the Pulse Secure's existing products, and will help the latter create a uniform user experience on both PCs and mobile devices.

Pulse Secure CEO Andrew Monshaw said, "Security is the No. 1 issue for IT organizations, but it's also the No. 1 reason many BYOD programs fail if not done right. So, if we're going to live in a world where employees want to use their own personal devices for work, it's extremely important to get the necessary security policies enacted in a simple, easy-to-use and robust way for both the end user and IT admin."

Monshaw added, "Many times, enterprises focus on the device exclusively, as opposed to also considering data in motion, like secure access to data. Additionally, they fail to consider the compliance aspects, as in who is accessing what with which device." He continued, "Lastly, we've seen many enterprises try to protect apps with container solutions that alter the user experience and require the use of SDKs

or app wrapping to secure business applications. We're creating a secure environment on devices that ensures a native user experience for both work and life. For the enterprise, this is an important part of creating a work environment that is conducive to talent retention."

"MobileSpaces pioneered a unique virtualization technology that allows enterprises to create a seamless and secure BYOD strategy for the end user, meaning enterprises can connect the native business apps they need seamlessly to campus, data center and cloud applications and services," Monshaw explained.

Goldschlag said, "Enterprise mobility is key to business today but faces new challenges of connectivity, scale and application support. With the acquisition of MobileSpaces, Pulse Secure is helping enterprises rethink mobility to deliver unmatched power to their business in a way that is simple and secure for IT while also being natural for users." There are now three main threats in this space," explains Yakov (Yaki) Baranes, a senior analyst for the security division of Frost & Sullivan, who has made a special study of the subject. "One is an ordinary diver swimming under his own power, who penetrates a closed area or gets close to energy infrastructure in the open sea or on the beach. Another threat is divers riding an undersea vehicle, and a third, which has become more relevant in recent years, is unmanned undersea systems that can be operated remotely without endangering the divers."

"When the threat is detected so early, the enemy obviously does not have much of a chance"

What is the breakthrough in this sphere in recent years? "In the past, sonar was an awkward technology on a very big scale. It was available to very large ships, which lowered the sonar into the water using a special crane. It was used to detect very large objects, such as

submarines," Baranes says. "Over the years, the technology has been improved. The quality of the signal and its processing have undergone about the same process as radar. The technology has become more miniature; now a person in a boat can carry a sonar for detecting divers, lower it from the side of the boat, and operate it. There is almost no need for an operator to decode the signal. The system does it."

In addition to its mobility and reliability, the Israeli system has extended the detection range from a radius of a few hundred meters to several kilometers, giving the coast guard or the navy a long time to prepare to meet the threat.

Control of market worth hundreds of millions

Baranes's study shows that not only Israel, but the whole world, takes these threats very seriously. The scope of oil and gas drilling in the open sea has grown in recent years, and world trade is still taking place there. An attack against strategic installations in the open sea or on the beach, such as oil rigs, gas drillings, coastal power stations, nuclear facilities, etc., can cause very heavy damage to entire economies, and can even paralyze an entire country for a few days.

Drilling companies and countries with coastlines are investing enormous sums in this area, and the big winner is DSIT, which currently offers the world's most advanced detection device. Frost & Sullivan believes that a worldwide total of over $200 million will be invested in this area over the next six years. DSIT currently controls about 70% of the global sonar market.

DSIT's flagship product in the market today is called Aqua Shield, a land-based sonar designed to protect stationary targets, such as coastal facilities and drilling sites. The detection range of this product is a few kilometers. Of course, it also offers Point Shield, a smaller

5

mobile system with a shorter range, designed for vessels moving about in the open sea.

How did the operation affect sonar sales?

Baranes: "There has always been the idea that an undersea threat is a threat. A diver has to get into the water from some coast or ship. There's always a risk like this. All the new system has done is to extend the detection range to underwater. The event has been very bracing for the company. That is the nature of threats. They are recognized, but when it becomes concrete, the market is catalyzed."

Operation Protective Edge is not the first time Israel has faced a threat of this kind. Hamas has tried more than once to send swimmers into Israeli territory to carry out attacks. That is why Israel's seaports are secured by a sniper unit and an undersea unit.

Intercontinental Exchange buys SuperDerivatives for $350m
AquaShield
SuperDerivatives provides risk management analytics, financial market data and valuation services.

Intercontinental Exchange (NYSE: ICE), the global network of exchanges and clearing houses, has entered into a definitive agreement to acquire SuperDerivatives for $350 million in cash. SuperDerivatives provides risk management analytics, financial market data and valuation services. The transaction is expected to close in the fourth quarter of 2014.

ICE Chairman and CEO Jeffrey C. Sprecher said, "SuperDerivatives is an innovative developer of valuable derivatives data and technology, and will play a key role in extending our financial market clearing and data capabilities. We already work with SuperDerivatives in our existing businesses and we look forward to extending that work with the global SuperDerivatives team as we grow our risk management services across our global exchanges and clearing houses."

SuperDerivatives Chairman, CEO and founder David Gershon said, "Over the past few years ICE has taken the lead in shaping the evolution of the financial markets. We strongly believe that with the data, technology and the broad suite of products SuperDerivatives offers there are great benefits we can deliver to the market including efficiency, transparency and innovation. We believe that joining with ICE opens a tremendous opportunity for us to deliver our innovative products and services across the globe."

SuperDerivatives is based in Tel Aviv, and employs about 300 people. Gershon founded the company in 2000 and SuperDerivatives was chosen by "Globes" as one Israel's most promising start-ups in 2006. SuperDerivatives planned an IPO about six years ago at a valuation of some $1 billion, but the move did not go ahead. There have been reports in recent years that the company was for sale and that an investment bank was seeking a buyer. According to IVC, among the investors in the company are the Accel, Pitango, and Shavit funds.

SuperDerivatives provides risk management analytics and systems across all asset classes, including interest rates, FX, credit, equities, energy and commodities to customers ranging from banks, asset managers, corporations, central banks, auditors and brokers.

The company's DGX front-end data system is a powerful web-based platform to deliver real time analytics, data, news and multi participant chat with video in a cost-efficient manner. Other products and services include independent valuation, market data for mark-to-market, multi-asset derivatives front office and risk systems

and a multi-asset OTC execution platform.

Aqua Shield thwarts marine terrorism
One of the prominent events in Operation Protective Edge was the elimination of a Hamas terrorist squad sent by sea to Zikim on the Ashkelon coast in order to carry out a large-scale terrorist attack. The thwarting of the attack was unquestionably a very great achievement in many aspects: the rapid operational response, the encounter between the IDF unit and the terrorists, and above all the early detection of the threat, which made appropriate preparation possible.

The scuba terrorists who made their way from the Gaza Strip to Israel came through an area of shallow water a few dozen meters from the coast, where swimming is possible, but the water is not deep enough for naval vessels to patrol and operate there. The advanced detection systems, however, can also cover shallow water, which makes it difficult to penetrate Israel territory from this area. This unsuccessful terrorist strike exposed the problem of the threat of marine terrorism, a threat that has already been worrying the world for several years. Israel's Aqua Shield system, which gives marine terrorists no chance, makes it a global leader in this field.

There are currently two companies in the world capable of dealing with undersea threats. One of them is Israeli company DSIT, a world leader in undersea technology.

"Bloomberg" says the Hod Hasharon solar power optimizing systems developer wants to raise $100 million.

SolarEdge Technologies Inc. plans to raise more than $100 million in a Wall Street IPO in 2015, "Bloomberg" reports.

PV optimization co SolarEdge raises $37m
PV co SolarEdge raises $8m from Silicon Valley Bank

Based in Hod Hasharon, SolarEdge develops solar power optimizing systems. The company is in talks with financial institutions, sources told "Bloomberg."

SolarEdge CFO Ronen Faier told "Bloomberg," "We have all intentions to become one of the largest players in the market and doing that in this market requires a lot of money." However, Faier declined to discuss details of any potential IPO. "It's very hard to grow a large company on private money," he said.

In 2011 SolarEdge raised $37 million in a funding round led by Norwest Venture Partners. Other investors include Opus Capital Venture Partners LP, Walden International Inc., Genesis Partners, Vertex Venture Capital, Lightspeed Venture Partners and General Electric Co.'s GE Energy Financial Services unit. SolarEdge is looking to expand its Asia operations, Faier also told "Bloomberg."

Founded in 2006, the company has shipped over 2 million power optimizers to more than 45 countries worldwide and its installations can be found in five continents, according to its website. Annual sales are "well north of $100 million," and the company is approaching profitability, according to Faier.

the Top Tech Stories in Israel, 2013:
1) Evogene IPO – Wix wasn't the only Israeli company to go public this year (there were seven altogether), but the emergence of agritech company Evogene could be the most important of them all. Evogene doesn't just represent itself – it represents Israeli prowess in agritech, an industry that is using science and technology to figure out ways to feed more

people, a skill that will become ever more necessary as the years go by.

Besides the hundreds of agritech and food-oriented biotech start-ups in Israel, the country boasts the Vulcani Institute, where better fruits and vegetables are born, without using genetic modification methods.

2) Israel Brain Technologies – the "brainchild" of President Shimon Peres, IBT gave out a million dollar prize in October to a team of American scientists who developed robotic arms for disabled people that are controlled by neural sensors.

Dr. John Donoghue (L.) accepts the $1 million B.R.A.I.N Award from President Shimon Peres at the recent BrainTech 2013 event in Tel Aviv (Photo credit: Chen Galili)

Dr. John Donoghue (L.) accepts the $1 million B.R.A.I.N. Award from President Shimon Peres at the recent BrainTech 2013 event in Tel Aviv

IBT, headed by Dr. Rafi Gidron, is anticipating the next wave in biotech, in which technology will be employed to solve the riddles of the mind, as well as help those suffering from brain-related disorders like Alzheimers and Parkinson's diseases to live better, fuller lives.

3) To Waze, the big winner of 2013, add security company Trusteer, which IBM bought for nearly a billion dollars, a sum similar to that of the Waze deal. Waze, of course, is the navigation app so many rely on to get to and from work and other destinations. Trusteer's software can prevent malefactors from taking over bank accounts and using malware to steal information by enhancing identification of users interacting with a web site using advanced device "fingerprinting," which evaluates tens of thousands of small details to determine whether a device or user making a request for information is legit or phony.

There were some other big tech deals this year, such as the respective purchases by Apple and Intel of PrimeSense and Omek Interactive. Both Israeli companies have developed unique 3D interactive technology (PrimeSense is the company behind Microsoft's Kinect), and with Apple and Intel racing to enhance their device's ability to understand gestures, the two companies' technologies are likely to end up as products sometime in 2014.

Waze co-founder Uri Levine at a Jerusalem conference in May (photo credit: Flash90)

Waze co-founder Uri Levine at a Jerusalem conference in May (photo credit: Flash90)

4) Project Ray: Technology developed by Project RAY to enable the blind to "see" via their smartphones went live this year, in the form of the RAY Huawei Vision phone, a device that lets blind users not only make phone calls, but also allows them to send text messages, search the Internet, identify the denomination of cash, recognize colors, and access over 100,000 audio books and magazines.

Qualcomm, which has a large presence in Israel, has long been a backer of RAY, and has helped the Israeli company further develop its technology that uses sensors, wifi and GPS chips, and easy to use features to provide a tool for the blind that could immeasurably improve their lives.

5) "Digital Israel" – From laying a network of fiber optic cable to every home in Israel that has an electrical connection to a government commitment to put as many services on-line, to a data transfer backbone to be provided by Cisco, the seeds were planted this year for the Israel of tomorrow – turning it into a country where super-fast Internet is available to everyone, and businesses and individuals even on the periphery have an opportunity to participate

in the digital economy.
John Chambers speaks at the Presidential Conference (Photo credit: Courtesy)

Cisco CEO John Chambers speaks at the Presidential Conference in June.

With the new infrastructure in place, said Cisco CEO John Chambers on a visit to Israel in June, the Start-Up Nation will be able to add a lot more start-ups to its portfolio, as digital opportunities open up to more Israelis.

6) Bonus Biogroup's bone regeneration factory – Using 3D imaging technology and patented culture bioreactors, Bonus Biogroup is building a factory where bones will be grown "to order" – using the cells of people who need bone grafts to generate new bones to replace broken ones. It's a better method than the scaffolding methods currently in use, but it's those bioreactors one should keep an eye on. If they can grow bones, why not a heart or liver?

7) Beersheva Tech Park Inauguration – Since 1948, the country has done everything it could think of to get people to settle in the Negev. From settling hapless immigrants in soulless development towns to throwing money at families that agreed to "rough it" down south, nothing worked; the Negev remained as forlorn as ever.
Projected aerial view of the IDF's advanced technology and training facilities near Beersheva (Courtesy: Ministry of Development for the Galilee and Negev)

Projected aerial view of the IDF's advanced technology and training facilities near Beersheva (Courtesy: Ministry of Development for the Galilee and Negev)

Until now. Ben Gurion University in Beersheva has emerged as one of the country's leading research centers in computers, network, and

security technology, and this year saw the establishment of a new tech park that will provide job opportunities in the area for graduates of BGU, as well as for throngs of Israelis from the center of the country, who will follow the jobs and head for the Negev to take advantage of opportunities.

The IDF is setting up its own technology center right near the Tech Park – all of which means that in a few decades, the Israel's technology "center of gravity" could move due south.

8) Gene-G: Add to the mix of Israeli tech achievements the advanced research going on in the field of genetics, illustrated by the GeneG app. As prices for personalized genetic sequencing tumble, the app, developed by Tel Aviv University researchers, will help users analyze their own personal genome, opening the door to personalized medicine – with users able to determine exactly what they need from a doctor or hospital.

No longer will patients have to put up with side effects from "off the shelf" medications; by analyzing their genetic sequence, they will be able to demand more specified treatments for their personal situation, demands that will promote pharmaceutical makers to come up with ways to satisfy this new market. That's just one way access to the genome will improve lives, and GeneG, along with other Israeli start-ups, is at the forefront of this technology.

Defense Ministry conducts successful Arrow
This was the first full interception trial for the anti-ballistic missile.

Israel's Ministry of Defense has today successfully conducted its first-ever full interception trial of the Arrow 2 anti-ballistic missile system against a real target missile that was similar to the Iranian Shahab ballistic missile. Real-

time documentation showed the trail left by the Arrow 2 in the Ashdod region during the trial.

IAI begins Arrow 3 production
Arrow 3
Arrow 3 completes successful flight trial

The Arrow 2 is designed for long range interceptions and is a main part of the multi-layer defense system being developed by the Ministry of Defense. Following the trial the Defense Ministry said, "The success of the trial represents an important milestone in building the State of Israel's operational capability to cope with the threats directed at it."

Last February the Defense Ministry's Israel Missile Defense Organization together with the US Missile Defense Agency (MDA) conducted a flight of the Arrow 2 interceptor, which also ended successfully

Israeli startup hopes to stop satellites from getting lost in space
Micro-satellites will tow errant ones back into orbit and escort dying ones to their final resting orbit.

An image of a micro-satellite.
An image of a micro-satellite.Foreign firms revise bids to buy Israeli satellite operator Spacecom
's most advanced satellite, Ofek 10, enters orbit

In August, the European Space Agency launched two Galileo satellites from French Guinea into the wrong orbit. Tsk tsk.

The two therefore won't be joining the European GPS navigation network, which currently consists of four satellites.

The Europeans have high hopes of their satellite program, which they hope will have 30 of the

machines orbiting our planet by the year 2020 at a cost of billions of euros, so right now they're losing hair over what went wrong. Meanwhile, one Israeli startup believes that its product, assuming successful development, can reverse mishaps like getting lost in space and generally save the industry billions of dollars a year.

Effective Space Solutions's micro-satellite is being designed to extend the lifespan of telecom satellites, and tow them back into orbit when they go astray, as happens.

Today, communications satellites last no more than 12 to 15 years. The company believes it can extend that lifetime by another year. Not impressed? To the company operating the satellite, it could mean tens of millions of dollars more in revenues.

Boldly piling up paperwork

Effective Space Solutions was founded by Arie Halsband, who ran Israel Aerospace Industries' space division from 2006 to 2011, after decades at various space-related functions in Israel's defense industry.

At the tender age of more than 60, Halsband had the epiphany that innovation in outer space wouldn't come from big, slow companies. It would take a nimble startup serving the commercial market, not a monster serving the military establishment.

Going boldly where no man has gone before doesn't have to take mountains of paperwork that weighs more than a satellite, he quips.

The relatively hoary entrepreneur tapped the Singularity fund for a million dollars and raised another million and a half from the Israeli space agency. The field he chose: micro-satellites.

Micro-satellites piggyback on bigger launches

into space, which by definition reduces their cost of launch. "They can do a great deal of work with very little fuel," says Halsband. They can do the job with one satellite and then zip over to another needing succor in space.

Telecommunications satellites typically last from 12 to 15 years. They float above the Earth at a fixed point, advancing in synchronicity with the planet's rotation.

According to UN regulations, when satellites reach the end of their lifetime, they must go to the "satellite graveyard" – a defined orbit zone hundreds of kilometers farther out in space than regular orbits, where the decommissioned satellite can't pose a danger.

The journey to the so-called "junk orbit" can take six to nine months. During the trip, assuming the satellite is still in working condition, it can continue carrying out its mission.

The satellites are programmed to set out for the graveyard orbit when they have just enough fuel left to get there.

Effective Space Solutions wants to give the satellites up to nine months more lifetime by letting them use up their fuel. Then its satellite-tow truck would show up and drag the thing to the cemetery, Halsband explains.

So how does it work? The Effective Space robotic satellite is controlled remotely by humans on the ground. It has special sensors that can identify a communications satellite from afar.

The robot satellite approaches the communications satellite gradually, initially within 4 km, then creeping up to within a few hundred feet. The robot satellite, which weighs 250 kilos at launch (or about a tenth of most telecom satel-lites), has a docking mechanism, allowing it to connect to the satellite communications. It also has robotic arms to grab onto the target satel-lite.

Telecommunications satellite comprise 75% of the civilian satellite market, which turns over $100 billion a year. Effective Space calculates that it can save them as much as $3.5 billion a year in income lost because perfectly functional satellites are using up their resources to travel to the graveyard.

Some 300 satellites are orbiting Earth, and about 20 end their life each year, says Halsband. The companies make some $65 million a year in revenues from each satellite, so it pays to extend their satellite's lifetime by a year.

Israeli startup hopes to stop satellites from getting lost in space
Micro-satellites will tow errant ones back into orbit and escort dying ones to their final resting

Israel's most advanced satellite, Ofek 10, enters orbit

In August, the European Space Agency launchedtwo Galileo satellites from French Guinea into the wrong orbit. Tsk tsk.

The two therefore won't be joining the European GPS navigation network, which currently consists of four satellites.

The Europeans have high hopes of their satellite program, which they hope will have 30 of the machines orbiting our planet by the year 2020 at a cost of billions of euros, so right now they're losing hair over what went wrong. Meanwhile, one Israeli startup believes that its product, assuming successful development, can reverse mishaps like getting lost in space and generally

The decline in investments by Israeli venture capital funds continued in the first quarter, amounting to $106 million, the lowest quarterly share - 16% - on record, and down 25% from the preceding quarter and 33% from the corresponding quarter.

"This is the third quarter in a row that capital raising exceeded $650 million. These are great figures that show a sustained, positive momentum for the Israeli high-tech industry," said IVC Research Center Koby Simana. "At the same time, high-tech's success is clouded by the weakness of local venture capital funds, with investments continuing to shrink from quarter to quarter." He added, "While foreign VC participation in Israel is a positive development for the high-tech industry, it is important to understand that at the core of the process lies a clear food chain. Without funds raised by local VCs, there won't be sufficient capital for early stage investments. Without early stage financing, there won't be late stage investments. Therefore, it is critical to understand that prolonged absence of Israeli VC funds threatens high-tech industry growth in the longer run."

Internet start-ups raised the most capital in the first quarter, $260 million, or 39% of the total - the highest amount and share by the sector since 2000. Software companies were in second place, despite the steady drop in their share of total capital raised to 21% in the first quarter from 23% in the preceding quarter and 31% in the corresponding quarter.

Late-stage companies raised $227 million in the first quarter, 34% of the total raised, mid-stage companies raised $221 million, and seed-stage companies accounted for 6%**.**

save the industry billions of dollars a year.

Effective Space Solutions's micro-satellite is being designed to extend the lifespan of telecom satellites, and tow them back into orbit when they go astray, as happens.

Today, communications satellites last no more than 12 to 15 years. The company believes it can extend that lifetime by another year. Not impressed? To the company operating the satellite, it could mean tens of millions of dollars more in revenues.

Boldly piling up paperwork

Effective Space Solutions was founded by Arie Halsband, who ran Israel Aerospace Industries' space division from 2006 to 2011, after decades at various space-related functions in Israel's defense industry.

At the tender age of more than 60, Halsband had the epiphany that innovation in outer space wouldn't come from big, slow companies. It would take a nimble startup serving the commercial market, not a monster serving the military establishment.

Going boldly where no man has gone before doesn't have to take mountains of paperwork that weighs more than a satellite, he quips.

The relatively hoary entrepreneur tapped the Singularity fund for a million dollars and raised another million and a half from the Israeli space agency. The field he chose: micro-satellites.

Micro-satellites piggyback on bigger launches into space, which by definition reduces their cost of launch. "They can do a great deal of work with very little fuel," says Halsband. They can do the job with one satellite and then zip over to another needing succor in space.

Telecommunications satellites typically last from 12 to 15 years. They float above the Earth at a fixed point, advancing in synchronicity with the planet's rotation.

According to UN regulations, when satellites reach the end of their lifetime, they must go to the "satellite graveyard" – a defined orbit zone hundreds of kilometers farther out in space than regular orbits, where the decommissioned satellite can't pose a danger.

The journey to the so-called "junk orbit" can take six to nine months. During the trip, assuming the satellite is still in working condition, it can continue carrying out its mission.

The satellites are programmed to set out for the graveyard orbit when they have just enough fuel left to get there.
Effective Space Solutions wants to give the satellites up to nine months more lifetime by letting them use up their fuel. Then its satellite-tow truck would show up and drag the thing to the cemetery, Halsband explains.

So how does it work? The Effective Space robotic satellite is controlled remotely by humans on the ground. It has special sensors that can identify a communications satellite from afar.

The robot satellite approaches the communications satellite gradually, initially within 4 km, then creeping up to within a few hundred feet. The robot satellite, which weighs 250 kilos at launch (or about a tenth of most telecom satellites), has a docking mechanism, allowing it to connect to the satellite communications. It also has robotic arms to grab onto the target satellite.
Telecommunications satellite comprise 75% of the civilian satellite market, which turns over $100 billion a year. Effective Space calculates that it can save them as much as $3.5 billion a year in income lost because perfectly functional

satellites are using up their resources to travel to the graveyard.

Some 300 satellites are orbiting Earth, and about 20 end their life each year, says Halsband. The companies make some $65 million a year in revenues from each satellite, so it pays to extend their satellite's lifetime by a year.

Space Effective has finished planning its micro-satellites and proved their feasibility. The company is raising money to continue development and start manufacturing. Despite the extremely challenging nature of its development, which has to meet stringent regulatory standards, the startup has just 12 employees and has outsourced a lot of development. It will also be outsourcing production and hopes to see its first orbiting tow-truck in service by the last quarter of 2016 or start of 2017.

The company means for its orbiting offspring to zip between satellites, serving as many as 8 to 20. And then they too will die, after about four years. May their short memory be blessed.
Space Effective has finished planning its micro-satellites and proved their feasibility. The company is raising money to continue development and start manufacturing. Despite the extremely challenging nature of its development, which has to meet stringent regulatory standards, the startup has just 12 employees and has outsourced a lot of development. It will also be outsourcing production and hopes to see its first orbiting tow-truck in service by the last quarter of 2016 or start of 2017.
The company means for its orbiting offspring to zip between satellites, serving as many as 8 to 20. And then they too will die, after about four years. May their short memory be blessed.

Magma Venture Partners raises $150m Fund IV
The fund plans to invest exclusively with Israeli entrepreneurs.

Israeli venture capital firm Magma Venture Partners, which focuses on early-stage technology and has $500 million under management, has announced the completion of fundraising for Magma Venture Capital IV with $150 million in new committed capital. Magma says that the fund received strong interest and was oversubscribed within weeks of announcement. This fund comes on the heels of a third fund raised in early 2012.

Australian VC fund Square Peg expands to Israel

Fund IV will continue Magma's strategy and investment focus of investing across areas of information, communication technology including Mobile, Cloud, New media, SaaS, e-commerce, UGC (User Generated Content) and Cyber Security. The fund plans to invest exclusively with Israeli entrepreneurs, primarily in Israeli based technology teams, in their earlier stages of development.

The new fund continues the predecessor fund's focus and activities and is expected to begin investing in early 2015 after Magma III reaches investment capacity. The fund expects to invest in seed and series A financing rounds, in approximately 25-30 opportunities with typical investments of $0.5 6.0 million.

Magma Venture Partners was founded in 1999. book (NASDAQ: FB); Provigent, acquired by Broadcom (NASDAQ: BRCM); Wintegra, acquired by PMC-Sierra (NASDAQ: PMCS); and DesignArt, acquired by Qualcomm (NASDAQ: QCOM). Other notable investments by Magma are in Hola, Valens, Magisto, TabTale, Appsflyer and CorePhotonics

CyberArk Software nearly doubles after Nasdaq IPO

The Petah Tikva based cyber security company has a market cap of $881 million.

Israeli cyber security company CyberArk Software Ltd. (Nasdaq:CYBR) raised $85.8 million last Wednesday on Nasdaq at a company value of $473 million. The company sold 5.36 million shares at $16 per share, above the planned range of $13-15.

CyberArk Software prices Nasdaq IPO above range
Nasdaq trading following Mobileye (NYSE:MBLY) and ReWalk Robotics Ltd. (Nasdaq:RWLK).

Petah Tikva based CyberArk Software has developed a new layer of IT security solutions that protects organizations from cyber attacks that have made their way inside the network perimeter. CyberArk was founded 15 years ago

ISRAEL HIGH-TECH REPORT
A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES
JOSEPH MORGENSTERN, EDITOR

KEEP YOUR FINGER ON THE PULSE OF ISRAEL'S TECHNOLOGICAL PROGRESS