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Berkshire Completes Iscar Acquisition

Warren Buffett and Steff Wertheimer



Warren Buffett's Berkshire Hathaway Inc. (BRKA, BRKB) has acquired for \$2.05 billion the remaining piece of an Israeli metalworking company that it had bought a majority stake in seven years ago.

Berkshire purchased the remaining 20% stake in IMC International Metalworking Companies, called Iscar, from the Wertheimer family, the founders of the firm. They had sold the first 80% to Berkshire for \$4 billion in 2006, meaning the company doubled in value since the initial transaction.

Iscar, based in Tefen, Israel, was Mr. Buffett's first overseas acquisition for his Omaha, Neb., conglomerate, which makes candy, sells jewelry, operates power plants and runs a railroad. Iscar, one of the leading makers of metal-cutting tools, has flourished under Berkshire, opening new plants, expanding its product offerings and acquiring rivals, including Tungaloy, a Japanese cutting-tool manufacturer.

Iscar employs about 12,000 people, up from about 6,500 at the time of the first deal.

"As you can surmise from the price we're paying for the remaining interest, IMC has enjoyed very significant growth over the last seven years," Mr. Buffett said Wednesday in a statement announcing the deal.

Mr. Buffett has frequently praised Iscar's managers in public for how they've run the company.

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Berkshire Completes Iscar Acquisition
Ormat unit signs \$254m Indonesian geo-thermal deal
2012 Israeli private equity transactions reach \$2.6 billion
Israeli private equity funds
600 cows in one hour : Israel is the world leader In milking technologies
ReWalk
Accel Partners raises \$475m Europe, Israel focused fund
Israeli start-ups raising less capital
Competitor bids to buy Spuntech

In his annual letter to shareholders in February 2012, he called them “brilliant strategists and operators” who run Iscar in a manner that “continues to amaze us.”



Berkshire Hathaway's initial acquisition of Iscar was the largest-ever foreign investment in an Israeli company. In Israel, it was hailed at the time as a seminal transaction symbolizing a vote of confidence in the country's economy and its geopolitical stability by a celebrated investor known for conservatism. After an initial announcement of the deal, the transaction was completed during a month-long summer war with the Lebanese Hezbollah military, whose rocket attacks shut down northern Israel, where Iscar is based.

Some statistics

Israel is the 100th smallest country, and has about 1/1000th of the world's population. Only 65 years old, 7 million people strong (less than Virginia), and smaller in size than New Jersey, surrounded by enemies, under constant threat and possessing almost no natural resources, and yet...

Relative to its population, Israel is the largest immigrant-absorbing nation on earth. It has absorbed 350% of its population in 60 years. Israel is the only country in history to have revived an unspoken language.

Since the founding of the state, Israel has won more Nobel Prizes per capita than any other country other than Switzerland. It has more laureates in real numbers than China, Mexico and Spain.

Israel has the 8th longest life expectancy (80.7

years), longer than the UK, US, and Germany. Israeli films were nominated three years in a row for the Academy Award's Best Foreign Film.

Israel is the only country that entered the 21st century with a net gain in its number of trees, even more remarkable -- in an area that's mainly desert.

Over 90% of Israeli homes use solar energy for hot water, the highest percentage in the world. Israel will be the first country to host a national electric car network.

Israel is ranked in the top five Cleantech countries of the world, and operates the world's largest desalinization plant.

Israeli companies are producing the largest solar energy production facility in the world.

Defying the Odds

Israel is the only country whose indigenous population returned to its native land after 2,000 years of forced exile.

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There are 26 official Muslim states in the world, and 18 official Christian states, but there is only one Jewish state.

Israel is the 100th smallest country, and has about 1/1000th of the world's population. It is only 62 years old.

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Israeli companies are producing the largest solar energy production facility in the world.

Five star performance

Israel has the 3rd highest rate of entrepreneur-

ship among women in the world.

Israel has attracted the most venture capital investment per capita in the world, 30 times more than Europe.

Israel has more NASDAQ-listed companies than any country besides the US - more than all of Europe, India, China and Japan combined.

In proportion to its population, Israel has the largest number of startup companies in the world. In absolute numbers, Israel has more startups than any country other than the U.S.

Defying the Odds

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There are 26 official Muslim states in the world, and 18 official Christian states, but there is only one Jewish state.

Ormat unit signs \$254m Indonesian geothermal deal

The first phase of the 330-megawatt Sarulla geothermal power station in Sumatra is due to begin operating in 2016.

Ormat Industries Ltd. (TASE: ORMT) subsidiary Ormat Technologies Inc. (NYSE: ORA), an Israeli company, announced that Indonesia's Sarulla Operations Ltd., in which it is a partner, signed a joint operating contract (JOC) and energy sales contract (ESC) for the 330-megawatt Sarulla geothermal power project in Tapanuli Utara in north Sumatra. Ormat designed the plant and will supply its Ormat Energy Converters, for which it will receive \$254 million.

Under the JOC, PT Pertamina Geothermal Energy, the project concessionaire, has granted Sarulla Operations the rights to use the geothermal field, and under the ESC, Indonesia's state utility, PT PLN, will buy Sarulla's electricity for 30 years.

Ormat unit Ormat International Inc. owns 12.75%

of Sarulla Operations. Its partners are Indonesia's Medco Energi Internasional Tbk (Jakarta (MEDC) and Japan's Itochu Corporation (TSE: 8001) and Kyushu Electric Power Co. Inc.

Sarulla is Indonesia's largest geothermal power project. It will be built in three phases of 110-megawatts each, and will utilize both steam and brine extracted from the geothermal field to increase the power plant's efficiency. Preliminary testing and development of the project has begun, and construction will start when consortium secures financing in a year. The project's first phase is scheduled to begin operating in 2016, and the next two phases will start 18 months later.

Ormat said that Japan Bank for International Cooperation (JBIC) and the Asian Development Bank are due to finance the project, along with loans from five commercial banks, backed by political risk guarantees from JBIC

Ormat CEO Yehudit Bronicki said, "After a long process of negotiations, we reached an agreement on the amendments to the JOC and ESC agreements that were required for the bankability of the project. Once the financing closes, we will be able to recognize revenues from the supply of the equipment over the construction period and further strengthen the performance of our Product Segment. This project, represents our entry into Indonesia, a region we have been excited about for some time. We believe the potential opportunity in Indonesia is significant, and we look forward to pursuing opportunities in what we anticipate will be a growing market in the years to come. I would like to thank Pertamina, PGE, PLN and our partners for their confidence in our technology."

The Sarulla geothermal power stations will join Ormat's current power stations in the US, Kenya, Guatemala, and Nicaragua, which gen-

erate a net 575 megawatts of electricity.

2012 Israeli private equity transactions reach \$2.6 billion

Q4/2012 PE deals at \$557 million, up 105% from Q3/2012

2012 average deal size at \$56 million

Israeli PE funds accounted for 21% of PE investments in 2012

Software sector accounted for the largest share – 52% in 2012

In 2012, 46 Israeli private equity deals amounted to \$2.6 billion, 10 percent below the \$2.9 billion invested in 63 deals in 2011. The buyout of software firm Paradigm Geophysical by Apex Partners and JMI Equity for \$1 billion accounted for 39 percent of total annual deal value. Average deal size in 2012 was \$56.2 million, compared with \$45.6 million in the previous year.

Israeli PE funds invested \$530 million in 2012, accounting for 21 percent of total PE investments. This compares with \$963 million or 33 percent invested by Israeli PE funds in 2011. The largest private equity deal by an Israeli fund was the \$80 million buyout of Starhome, a mobile infrastructure company, by Fortissimo.

In the fourth quarter of 2012, eight private equity deals were valued at \$557 million, compared with \$271 million invested in 16 deals in Q3/2012, and \$1.2 billion invested in 13 deals in Q4/2011. The average deal in Q4/2012 was valued at \$69.6 million, compared to \$16.9 million and \$94.8 million in Q3/2012 and Q4/2011, respectively. (Figure 1)

Israeli PE funds accounted for 13 percent of PE investments in Q4/2012 with \$70 million. This compares with 89 percent and 23 percent in Q3/2012 and Q4/2011, respectively. The largest private equity deal by an Israeli fund was the \$45 million turnaround deal of Phoenicia Glass Works, a manufacturer of glass containers, by Fortissimo. The transaction accounted for 64 percent of all PE activity by Israeli funds in the quarter.

Rick Mann, Partner and Head of M&A at GKH, noted: “In 2012 we saw private equity funds investing in a wide range of Israeli industries. While technology remains a major attraction for private equity funds in Israel, established companies in more traditional businesses have also drawn interest. The prevalent players continue to be Israeli private equity firms, like FIMI, Fortissimo and Beresheit, although international firms often execute the larger PE transactions. The first quarter of 2013 has already seen the beginning of significant activity by foreign hedge funds in distressed debt situations, and it will be interesting to see whether this becomes part of a broader pattern in Israel.”

Israeli private equity deals by sector

In 2012, the software sector attracted the largest share — 52 percent — of total deal value. Cleantech transactions followed with 11 percent, which compared with 32 percent in 2011 when cleantech led all investments. Communications attracted 9 percent, and miscellaneous technologies sector followed with 7 percent.

Israeli private equity deals by type

In Q4/2012, buyouts continued to attract the largest share of investments, as in two last years, with three deals accounting for \$367 million or 66 percent of aggregate deal value. The largest transaction was a \$250 million buyout of Ex Libris, an enterprise applications company, by foreign PE investor Golden Gate Capital. Two straight equity deals followed with \$130 million or 23 percent of total deal value, while three turnaround investments accounted for the remaining 11 percent.

Israeli private equity funds

The IVC-Online Database maintains data on 24 active Israeli private equity management companies with a total of \$7.8 billion under manage-

ment. Four Israeli private equity funds raised \$1.1 billion in 2012.

600 cows in one hour : Israel is the world leader In milking technologies

When it comes to automated animal-milking, Israel is considered a world-leader. For decades, Israeli innovators have continuously developed advanced techniques to maintain dairy farms and milking efficiently. It is no surprise then that when a Canadian goat farm needed to enhance productivity – they turned to Israeli technology.

AfiMilk, a local company specializing in dairy herd management and situated in the Jordan valley kibbutz Afikim, has built a goat-milking parlor at Mariposa Dairy in Ontario, Canada. Mariposa Dairy has 1,500 goats that produce goat cheese for supermarkets in North America and was looking for a solution to increase productivity.

Shlomi Azran, AfiMilk’s sales manager, proudly takes us around the dairy farms of kibbutz Afikim, built in 1932, on the southern tip of the Sea of Galilee. He tells about AfiMilk’s latest project in Canada: “The parlor has 30 positions on each side, so it can milk 60 animals at each time. In one hour, it can milk 600 animals. We also built intricate automatic gates that guide the movement of the goats”

Grinning broadly, he adds: “The farmer in Canada has told us that with our system, he is producing more milk with less goats.”

AfiMilk’s project in Canada is not its first international business coup. In 2010, AfiMilk announced its partnership in a half-billion-dollar milk production project in Vietnam. The project involved establishing a dairy farm of 30,000 cows to supply 500,000 liters of milk a day, about 40 percent of Vietnam’s present milk consumption. AfiMilk was responsible for all stages of the enterprise, including breeding and preparing the land for

crops that will be used as feed.

Using hardware and software to produce milk more efficiently

The crown jewel in AfiMilk's system for the Canada project is the milk meter that has been customized for goat-milking. The meter is one of only a handful that has been approved for goat milking by the International Committee for Animal Recording (ICAR). AfiMilk's system makes use of electrodes to measure the quality and quantity of the milk.

-

Besides the milk meter, AfiMilk also has leg tags on each animal to collect data on the movement of the animal. According to Azran, the leg tag can tell whether a goat is standing or lying down, for example. The farmer would then be alerted when an animal is spending too much lying down, which can be a sign of illness.

Azran says the data can also be used to choose the next generation of goats for the farm. "Let's say you have space for 100 animals. You want the best 100 animals. So every year, farmers decide on the kids (baby goats) based on the mother goat's health records," Azran explains.

Adjusting cow-milking techniques to goats

The system for the goat-milking parlor is derived from what Afimilk has been doing with cow-milking. However, Azran is keen to stress that important modifications had to be made to optimize a system for goats.

"It's a different kind of milk. The raw material is different. And then there's the amount. If cows give you 10 liters per milking, the goat gives you 1 liter or 1.5. The amount is very small. So to be precise, you need to use specific equipment. You can milk a goat with cow equipment, but your results are not precise. And for us it is very

important to get the right information."

The Israeli Advantage

The average Israeli cow produces an impressive 12,000 litres of milk a year. By comparison, the average United States dairy cow produces 9,000 liters of milk a year. What accounts for the massive difference? According to Azran, it all boils down to the management of the animals, and that is where Israel's technology stands out.

So how did Israel's technological advantage come about? According to Ornit Sade-Benkin, the General Marketing Manager at SCR Dairy, another Israeli herd management specialist, it's a result of several factors.

Firstly, 60 percent of the country's cows are located on farms in kibbutzim – Israel's famous socialist collective communes where inhabitants mutually own means of production and divide among themselves the social and economic responsibilities, Sade-Benkin explains. An example of mutual cooperation is the cooperative ownership and management of "Hachaklait," a veterinary organization that works closely with the communes. Each farm pays an annual fixed rate per animal and in turn is visited two to three times per week. Each cow receives several routine visits per lactation to ensure she is producing at maximum potential. Such cooperation creates a less competitive environment where knowledge and best practices are shared among farmers.

Secondly, says Sade-Benkin, "Israel is one of the biggest hi-tech centers in the world. The eco system provides a good ground for start-ups and entrepreneurship. Startups like SCR Dairy are able to look at what the farmer needs and provide a suitable solution."

She adds: "SCR Dairy, for example, moved from being an Original Equipment Manufac-

urer (OEM) for the dairy industry to developing a breakthrough technology it calls FreeFlow. FreeFlow uses infrared technology to measure the quality and quantity of flowing milk. Today, it is the biggest manufacturer of milk meters, and has expanded to produce other equipment used in milking cows.”

“It looks like Israel will continue to be the leader in the field of dairy herd management for some time to come,” Sade-Benkin concludes.

Natural gas has started flowing from one of Israel’s sizable gas fields.

Israel’s Energy Ministry says gas from the off-shore Tamar field began flowing for the first time Saturday and would shortly reach a processing facility on Israel’s coast .

Noble raises reserve estimates on Israel’s Tamar gas field

Noble Energy Inc. said its Tamar field off the coast of Israel is producing about 300 million cubic feet a day. The company also boosted reserve estimates for the natural-gas field.

Tamar’s gross resource estimates were moved up to 10 trillion cubic feet from 9 trillion cubic feet, Noble said. The company operates the Tamar field, in which it holds a 36% stake. Other owners include Isramco Negev 2, Delek Drilling, and two companies.

The higher reserve estimate was largely expected, but “a bit ahead of schedule,” analysts at Simmons & Co. said in a note to clients. They estimated share impact of increasing Tamar’s resource potential is a \$1 a share and thus increased their price target on Noble Energy stock to \$148 from \$147.

So far this year, Noble shares have gained 13%, compared with gains of 7.2% for energy stocks in the S&P 500 Index.

Production at Tamar started last week, lauded by Israel as an important step toward energy independence. The field is expected to provide 50% to 80% of Israel’s natural-gas needs in the next 10 years.

Tamar was discovered in 2009 and holds an estimated 8.5 trillion cubic feet of gas. Another field, known as Leviathan, is estimated to hold some 16 trillion cubic feet and is expected to go online in 2016.

Israel has long relied on imports to meet most of its energy needs. The new gas finds are expected to supply Israel’s domestic needs for decades and could transform the country into an energy exporter.

ReWalk

The ReWalk is a medical device that enables people with lower limb walking impairments derived from spinal cord injury, brain injury, stroke and other severe walking impairments to free themselves from permanent confinement to wheelchairs and carry out routine ambulatory functions such as standing, walking and climbing stairs. This collaboration between Argo and the U.S. company Allied Orthotics and Prosthetics from New Jersey, was approved at the December 2008 BIRD Board of Governors meeting. The objective of the project was to undergo clinical trials at a U.S. rehabilitation center towards FDA approval and full commercialization. The chosen center was MossRehab In Philadelphia, PA

Accel Partners raises \$475m Europe, Israel focused fund

Accel Partners has completed the closing of Accel London IV, a \$475 million fund focused on Europe and Israel. Accel said that the fund was raised with unprecedented speed and demand. Accel London IV will invest in the firm’s core areas of expertise, including consumer Internet, big data, cloud, SaaS and mobile.

Accel partner Kevin Comolli said, “The fact that Accel London IV was raised in eight weeks and was significantly over-subscribed is a powerful endorsement of Accel London and the market opportunity in Europe and Israel from our world-class investors.”

Accel’s previous funds have invested extensively in Israeli start-ups. Recent exits include Amobee, which was sold to SingTel for \$321 million in which Accel had a 10% stake. Current investments include online family history company MyHeritage, customer management company Pontis, mobile security company MobileSpaces, personal ads company myThings, transaction management company CorrelSense, and gaming app company Dragonplay.

IAI wins \$400m Brazilian Air Force deal

Israel Aerospace Industries Ltd. (IAI) (TASE: ARSP.B1) has won a contract from the Brazilian Air Force to convert Boeing 767-300ER jetliners into planes for multi-mission planes refueling, strategic troop, cargo transport, and medical evacuation. IAI beat US and European companies in the tender. IAI declined to mention the size of the deal, but aviation experts said they estimated at \$250-400 million, making it one IAI’s largest ever contracts in Brazil.

Israeli sources “stated that IAI will initially convert three Boeing 767s, and may later convert more planes. The planes will be customized to Brazilian Air Force specifications, and will be delivered after IAI completes the lengthy and complex licensing process. The project will take several years to implement, under the Brazilian Air Force’s KC-X2 program to replace four KC-137 (militarized Boeing 707s).

In a statement, IAI said that, in the coming week, company executives would confirm the contract’s final details with Brazilian government and Air Force representatives. Sources

involved in the deal said that Brazilian subcontractors of IAI would carry out most of the conversion work.

that the Brazilian deal was a foothold in one of the world’s fastest growing markets, which the company has targeted. “We’ve had deals in Brazil before, but this is one of the big ones,” he said. “We’re making many efforts to establish our position in Brazil and we’re examining participation in other ventures.”

IAI plans to unveil some of its systems, including advanced air-to-air refueling LAAD Defense and Security International Exhibition, which will open in Rio de Janeiro in three weeks.

IAI has already converted Boeing 767-300s into refueling planes for the Colombian Air Force. The Colombian deal also includes the sale of upgraded used Kfir fighter jets, which IAI originally built for the Israeli Air Force.

Israeli start-ups raising less capital

The number of Israeli start-ups raising capital has fallen by 25% in the past five years, in contrast to a 70% increase worldwide.



The number of Israeli start-ups raising capital has fallen by 25% in the past five years, in contrast to a 70% increase worldwide, according to analysis by SiSense Ltd. The analysis is based on information on 115,000 companies worldwide, including 900 Israeli companies, in the TechCrunch database. The average financing round by Israeli companies was \$6.9 million, 30% less than the global average.

SiSense also found that the average A financing round by Israeli companies had fallen 40% over the past five years to \$3.4 million, and that the number of companies raising capital fell by 60%. The average A financing round by start-

ups worldwide fell by 12% to \$6.3 million, and the number of companies raising capital fell by 9%.

By contrast, the average B round by Israeli companies rose by 9% to \$11 million in 2007-12, although the number of companies raising capital was halved. Globally, average A rounds by companies also rose by 9% to \$11.8 million, and the number of companies raising capital fell by 18%.

SiSense also analyzed the sectors in which the most money was invested in Israel. Semiconductors was in first place, with an average investment of \$13.7 million. Hardware was in second place, with an average investment of \$11.4 million; followed by cleantech, with an average investment of \$8.6 million. The search sector, with an average investment of \$7.6 million, and software, with an average investment of \$7 million, close out the top five.

The sectors with the largest number of start-ups are software (30 start-ups), Internet (26 start-ups), e-commerce, advertising, and mobile (23 start-ups each), and gaming (17 start-ups).

SiSense also found that the average exit by an Israeli company was \$123 million, 53% less than the global average of \$263 million. The data indicate that the average IPO in Israel is \$542 million, 21% less than the global average of \$685 million.

SiSense was founded in 2004 by CPO Elad Israeli and CTO Eldad Farkash. Managed by CEO Amit Bendov, the company offers a business intelligence product for analyzing large quantities of data. Customers include Merck, US retailer Target, ESPN, and Israeli start-ups such as Wix and WeFi

SiSense VP business development Adi Azaria said” that the idea behind the company’s analy-

sis was to provide a work tool for venture capital funds to examine the average investment across different markets and industries. He says that a general analysis of the data indicates that average investments are not what they once were. “We are seeing more lean companies. It is harder for new companies to raise capital, and when they do so, they raise less money,” he said.

SiSense’s analysis also indicates the amount of time needed for start-ups around the world to raise an A financing round after the seed round. In 2007, 316 days were needed from the seed round to the A round, and in 2012, 505 days were needed, an increase of 60%. The time from the A to the B rounds has also increased by 35%.

“Start-ups need a lot more stamina than five years ago. Companies are trying to use every dollar they raise better, and employees’ salaries are more normal, and not inflated.”

Elbit’s outgoing CEO discusses the Israeli defense industry’s biggest missed opportunity

Thirty-one years after he took his first job as an engineer at Elbit Systems, and 17 years after assuming the post of CEO, Yossi Ackerman will be leaving the company at the end of the month. With so many years at the helm, Ackerman is not only the public face of the defense electronics maker – he made the company what it is today.

When Ackerman took over as CEO in 1996, Elbit had annual sales of \$286 million and a market capitalization of just \$106 million. After a string of 40 acquisitions, during which Elbit took control of much of the non-government sector of Israel’s defense industry, its revenue last year reached \$3.9 billion and its market capitalization \$1.6 billion.

When he leaves Elbit at the end of the month, Ackerman plans to spend a quarter of his time working on his olive grove of 1,200 trees, a quarter of his time studying, and another quarter doing community work, particularly with children with special needs. As for the rest of his time, he's still undecided.

"I want to step down before age 67 and I'm doing it at 64," he said. "I could have stayed on longer but I wanted to step down while I could make a successful transition and sit on the board of directors for a while."

What is the biggest difference between Elbit today and the company 20 years ago?

"When I arrived, 90% of sales were to Israel. Elbit was a sub-contractor," Ackerman said. "We would receive the specifications for a manufacturing order but we didn't define the customer's needs to provide a solution. We also didn't have any subsidiaries in foreign markets. The whole company was inside a single building.

"Today only 25% of our sales are to Israel. We have 40 subsidiaries and are present in 70 countries – and we are prime contractors. We're now a multicultural company that employs 12,000 people, so you can't manage the company without a lot of planning.

"Also, and this is maybe the most important change, as a prime contractor we sell to the final user, so we need to understand his needs, to define solutions and to provide a complete system. Developing this ability took us many years, as did learning how to sell overseas – in the United States, Austria, Brazil and India."

Elbit has been trading at the same market cap for the past four years despite many acquisitions. Even if you haven't diluted shareholders, you've opted for buying companies over paying bigger dividends?

"Mickey Federman, our controlling shareholder, and I believe Elbit is a company for the long term that has two goals – to contribute to the national security of the countries where we operate, and a return for our investors," Ackerman said.

"The defense industry is a long-term business. If we didn't buy the companies we did when the opportunity arose, someone else would have bought them. The company's balance sheet is weighed down by the cost of acquiring intangible assets; those costs will gradually go down."

Do you think Elbit fully maximized the potential of its acquisitions?

"From a strategic point of view, of defining research and development and creating a cross-cultural management, yes," Ackerman said. "But there is more potential for cost savings at Elbit Systems. I did a lot but we need to do more. I wasn't good enough at this."

Perhaps you're not suited to the Wall Street model, where you buy a company and fire a third of its staff?

"Every model has its advantages and disadvantages," he said. "Even the Wall Street model has a cost. You can fire whom you want to fire, but people you want to keep will leave too. Every decision has its price. I think that in the final analysis, our massive strategic undertaking took a lot of energy. As for the issue of efficiency, we'll do more about that in the next four years. If we had streamlined first and then made acquisitions, the situation would have been worse.

"Efficiency needs to be realized through growth without increased staffing, for example by natural attrition. I see companies that fire people and then employ new ones at lower salaries. That's a mistake, in my opinion."

What do you regard as the biggest missed opportunity during your time as CEO?

“The biggest missed opportunity was that the Israeli defense industry didn’t consolidate,” Ackerman said. “In Israel it’s a difficult process with government companies, not just in defense. Everyone says to me, ‘What do you want? Everything is alright right now.’ But the crisis will come and then there will be nothing to sell.

“When I left Israel Military Industries, it was a fantastic company, but it isn’t any longer. You need to act now while it is still in good shape. Compensate the employees, ensure their financial safety, undertake a reorganization and see to R&D. I think that’s the right thing to do. No one asked me, but this was something that needed to be done, and during my time it didn’t happen.

“Another thing we perhaps needed to do was to make another acquisition in the United States, because it’s the world’s biggest market. It didn’t happen because we didn’t find the right candidate, even though we retained people to find one. But we could have done more.

“The third disappointment was every time an employee was forced to leave.”

What are your feelings about the defense budget?

“I think, like with every public-sector system, more can be done to make it more efficient,” Ackerman said. “But when we decide not to build another hospital or highway, we know the risks. If you choose to cut NIS 5 billion, you need to sit with the army and decide what we’re not investing in.”

And what about the claim that the strategic

threats facing Israel have decreased in light of what is happening in neighboring countries?

“They have not decreased,” Ackerman said. “Every decision involves risk. A decision not to invest in preparing for a threat on a particular front is a weighty one and a decision that lasts a decade. The government needs to relieve the army of some goal or another. It’s facile to demand billions of shekels in cost cuts and still insist that the army must do everything.”

Photonic router vendor exits stealth-mode, sparks hypegasm Without the obligatory hype from the “every great business starts with venture capital” press, it is an interesting proposition: that turning integrated electro-optical chips into the basis of a router yields a faster device that’s smaller, uses less power, and generates less heat.

That’s what US-Israeli outfit Compass-EOS, based on a technology development driven by former ECI Telecom and PacketLight scientist

Dr Michael Mesh, is claiming. Coming out of stealth mode this week, it’s lit up the VC-watching news fraternity.

Here’s the claim as it comes from Compass-EOS:

“Compass-EOS’ patent-protected technology integrates optical and electronic components onto a single microchip. This represents a cross-disciplinary achievement which has been pursued by industry giants for years without success. It has long been accepted that direct silicon-to-photonics technology would be a required breakthrough to achieve order-of-magnitude Internet speed increases.”

Compass-EOS VP of marketing Asaf Somekh told The Register that at the heart of the compa-

ny's approach is the replacement of the electrical backplane with optics. Electrical backplanes are a bottleneck in several ways: to keep very high bitrate signals moving needs amplifiers along the way (adding power and heat to the router), and distance limitations tend to make the world of the Big Router very monolithic.

The optical interconnect the company has designed can handle both chip-to-chip and chip-to-interconnect communications, at 1.3 Tbps for distances of up to 200 meters. That, combined with the company's control software, means that individual units in different locations in a data centre can be presented as a single virtual router because the "backplane" is the same whether the routers are together or apart.

So while this isn't the world's first electro-optical chip, Compass-EOS is claiming to be the first to turn such a device into a commercial, in-production, deployable finished product. Manufacturability is key to its intellectual property, Somekh said, with a lot of work on the placement of lasers and lenses, and techniques to make it mass manufacturable – in essence, an electro-optical chip that can just drop into today's processes.

An example is here, a patent (US 7,702,191) for an electro-optical chip assembly. It is, in essence, a manufacturing technique: fabricating the chip so it's suitable for manufacture onto a PCB, and for coupling the chip's optics to the outside world.

There's also US Patent 8,090,230, which describes coupling a light source to a fiber – again, a key manufacturing process.

Somekh said the company is working with its manufacturers, educating them to ensure that as Compass-EOS starts to scale up manufac-

turing, it's able to keep pace.

The company also says that since the interconnect between routers is no longer a bottleneck, it's able to maintain high QoS at high rates of router utilization.

No wonder Cisco is listed as an investor: whether or not Compass-EOS is hell-bent on knocking The Borg off its perch, if it's able to churn devices out en masse and win customers, it'll be Bored double-quick. I'd expect that Cisco is even now making room in the Cascade brand to absorb, integrate and ultimately EOL the Compass-EOS kit.

Harman buys Israeli road safety app developer iOnRoad

Road safety app developer iOnRoad Technologies Ltd. has been acquired by global audio and infotainment company Harman International Industries Inc. (NYSE: HAR). The companies did not disclose the size of the deal, but it was reportedly for a few million dollars.

Although the exit is not large, iOnRoad's investors will see a respectable return on investment, as the company has raised \$1 million from Keydan Capital Ltd. and private investors. "Everyone is pleased by the deal - the investors, employees, and we, the founders," iOnRoad co-founder and CEO Alon Atsmon told "Globes".

iOnRoad was founded in 2011 by Atsmon and CTO Dan Atsmon as a subsidiary of PicItUp Corporation. The company has developed an app which uses the forward camera of a driver's smartphone and augmented reality technology to spot vehicles that are too close to the car, and warn the driver of the danger. The app can also identify the road's edges and shoulders to prevent the driver from leaving the road.

Motorola Solutions invests in BriefCam

Motorola Solutions has invested in video synop-

sis solutions developer BriefCam. The amount of the investment through its strategic investment arm Motorola Solutions Venture Capital was not disclosed.

Headquartered in Neve Ilan near Jerusalem, BriefCam provides video synopsis solutions for the rapid review, analysis and indexing of surveillance video. The investment will be used to expand BriefCam's worldwide marketing and sales activities. BriefCam's patented video synopsis technology enables the rapid review of captured video, with an index to the original source, whether video feed or archival footage, for on-the-spot event tracking, forensics and evidence discovery.

This technology fulfills the otherwise unmet need to browse video, investigate and identify incidents rapidly, and take action. The company's award-winning technology gives users the ability to review rapidly, compacting hours of events into a "brief" that takes minutes to view. The company's customers include police, military, border control and other homeland security agencies, as well as security operations at municipalities, transportation authorities, building and campus security offices, retail loss prevention and more.

The investment is Motorola Solutions' second in the Israeli market.

Motorola Solutions Venture Capital managing director Boaz Or-Shraga said, "We have been looking into various companies in the Israeli hi-tech industry, specifically in the area of public safety technologies. We were happy to find a great investment like BriefCam to expand our exposure in the growing video space. The substantial growth in the amount of surveillance videos created each year provides new opportunities for public safety and other industries, and we're glad to seize such an opportunity."

BriefCam CEO Dror Irani said, "It is our hope

that Motorola Solutions' experience and global presence opens new opportunities for BriefCam in areas such as public safety, safer cities and law enforcement, as well as enterprise and retail. We expect Motorola Solutions' global presence will also assist BriefCam greatly in accelerating penetration of new geographic regions where we have not been active to date."

Briefcam chief scientist Prof. Shmuel Peleg, VP R&D Dr. Yaron Caspi, and chairman Gideon Ben-Zvi founded the company in 2007

Foreign direct investment in February mainly jumped due to a \$630 million investment by a US company in an Israeli software services firm. In February, NCR completed its acquisition of Israeli retail software company Retailix.

Foreigners invested a net \$220 million in shares on the Tel Aviv Stock Exchange in February, following net investment of \$340 million in January.

In February, foreigners invested around \$300 million net in unlinked government bonds and sold around \$50 million in short-term bills called makams.

Preliminary figures for March indicate sales of about \$90 million in makams, sales of \$360 million in government bonds and sales of \$60 million in Tel Aviv-traded shares.

Israeli firm grows bones from fat

With the new findings, Bonus Biogroup based in the northern Israeli city of Haifa, will help millions of people all over the world suffering from bone diseases such as osteoporosis, bone infection and also accidents that cause irreparable damage to the bones, reported Xinhua.

By making the cells grow in a scaffold after scanning the patient's bones to determine the

shape, these cells then fill a mould and make a completely new bone resembling the lost one.

“By using live adult cells inside the scaffold and mimicking the body’s conditions, the cells fill the cast in a matter of a few months, two or three, so the patient is ready to receive an implant that his body will not reject, because it was taken from his own body,” Bonus Biogroup founder and CEO Shai Meretzki stated at a press conference.

The cell extraction procedure is very non-intrusive, unlike bone replacement surgeries today that take a piece of the patients’ bone and work on it to make it look as similar as possible to the bone it will have to replace. This, of course, is a painful and long process that requires months of post-operative care.

“We do a small liposuction on the patient’s stomach and make those cells turn into the new bone by telling each of them how to grow. Many patients encourage us to continue with the liposuction!” Meretzki laughed.

For now, Meretzki and his team only researched on rats, but the trials on human will begin soon, as they expect that their technology will be available for everyone in no more than three years. The new innovation in tissue growth, which took Meretzki and his team five years to develop, can also be applied in dentistry since many times dental implants cannot take root due to lack of bone structure.

“With this technology, dentists can grow bone tissue in the mouth so that the dental pieces can be easily put in place,” Meretzki said, though admitting that for now, growing organs in a similar way is still far down the line.

“Bone tissue is relatively easy to grow, because its cells are not as complex as the ones on body organs, but I don’t think it’s something impossible, we just need to research more,” he added. (IANS)



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