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# Israeli Defense Industry



Nowadays, the Israeli defence industry has

developed comprehensive capabilities on ground, air and sea combat and has a major success beyond the initial expectations of the Israeli governments. Additionally, Israeli Aerospace and Defence companies play a major role in a rather

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competitive international scene and are standing at the forefront of technological advancement, sophistication and efficiency by creating products of proven quality record, reliability and service ability. Based on this unique development, Israeli A&D companies have recorded several successes on selling these products globally.

Israel, produces a wide range of products from ammunition, small arms and artillery pieces to sophisticated Electronic Systems, such as Radar and Electronic Warfare Systems, UAVs, Search and Rescue Systems, Simulators and probably the world's most advanced Tank (MERKAVA). Major reason for the development of the Aerospace and Defence industry is the fact that the government, which owns three key defence firms, encourages the formation of private companies. This substantially leads to the creation of a rather competitive environment which helps the development of a sophisticated defence industry.

All the above inevitably led to exports, which today account for the majority of its revenues

and allows the country's defence industry to compete against some of the largest companies in the world for foreign contracts, in addition to producing many of the arms needed for Israel's own defence.

Another reason for the development of the Israeli Aerospace and Defence companies is that they should not expect to sell the majority of the



products that they manufacture domestically. So, selling in foreign countries is almost a necessity. Undoubtedly the initial steps of the development all military equipment produced were purchased by the Israeli Defence Forces. Nevertheless, the outstanding successes that the Israeli made weapons showed in the battlefield, drew the attention of customers on every continent. This tendency continues up to now as more than 70% of Israeli defence industry products are exported.

Another essential ingredient that Israel's Defence Industry has is the high quality and professionalism of its workforce. It is a common belief that the country has a large pool of experienced former security, military and police personnel that are employed in Aerospace and Defence companies. The aforementioned personnel gained experience from serving in the Defence and Security Forces and some of them continue to serve in the reserves of the Army.

This symbiotic relationship between the Army and the senior defence-industry employees is the reason why the Israeli engineers are successful and close to the operational user.



constantly operating.

This fact is combined with Israel's high-tech and Research & Development capabilities. The country is globally known as being an international center for R&D. Furthermore, its high-tech capabilities have enabled dozens of companies to develop expertise in the domain of Aerospace and Defence.

Finally, Israeli companies have been able to field test their systems and solutions in real-time situations as the Defence Forces are

The aforementioned technological environment enabled the creation of a robust Aerospace and Defence Industry. The battle-proven advantages, state-of-the-art technological superiority and excellent value of many Israeli-made products created an international reputation for the country. This is highlighted by the fact that several Israeli products fully comply with international standards and are globally deployed.

# Agent Video Intelligence

# **Comprehensive Video Analytics Solutions**





Agent Video Intelligence (Agent Vi) is a leading provider of open architecture, video analytics software deployed in a variety of security, safety and business intelligence applications worldwide. The comprehensive video analytics

solutions offered by Agent Vi extend from real-time video analysis and alerts to forensic search and post-event analysis, and are fully integrated with a range of third party edge devices and video management systems. Integrating Agent Vi's advanced video analytics capabilities into existing or new surveillance networks enables users to benefit from the true potential of their surveillance networks, transforming them into intelligent tools that respond to the practical challenges of the 21st century.

# **Agent Vi's Unique Architecture**

Agent Vi is the only video analytics company that has developed an architecture that provides end users with cost effective, highly scalable video analytics solutions that offer a full range of analytics functionalities simultaneously, without sacrificing on detection performance. All competing solutions on the market today fall into one of two architectural categories:

- Server based the video is delivered to a server in analog format or compressed over the network. The analytics algorithms run inside the server and process the incoming video feeds. A single server typically supports 4-16 cameras with the quality of detection and feature set declining as the number of supported cameras increases.
- 2. Edge based the video is processed by an embedded device either an encoder for handling analog cameras or an IP camera sitting at the edge of the network. The analytics algorithms run inside the edge device and send information about detected events over the network. This architecture typically suffers from limited processing resources which in turn limit the features and detection performance of the analytics algorithms.

In contrast, Agent Vi's unique, patented, Image Processing over IP (IPoIP™) architecture distributes the video analysis between the edge device and a server, offering a number of significant advantages:

- High detection rates The advanced algorithms offer very high probability of detection (POD) and low false alarm rates (FAR) for a variety of video analytics tasks, and in a range of complex environments, including indoor, outdoor and crowded scenes;
- Highly scalable A server with a quad core processor can support up to 200 cameras
  running a variety of analytics tasks. Server capacity can easily be increased to
  thousands by adding additional processors or server machines.
- Future proof Since most new features are developed on the server side, upgrading edge device firmware is unnecessary when a new product version is released or

- when analytics functionalities are added. Future increases in required processing resources are easily handled by adding an additional server.
- Bandwidth usage Each edge device uses an average bandwidth of only 40 Kbps when performing analytics.

## **Agent Vi's Products**

<u>Vi-System</u> is a real-time video analytics software that transforms standard surveillance networks into intelligent and effective detection and alert systems.

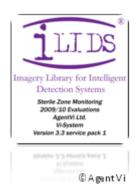


By performing real-time analysis of the video stream, Vi-System identifies and generates alerts for a variety of user-defined events relating to people, vehicles and objects. Used for applications such as security, safety and business intelligence, Vi-System offers effective monitoring of multiple video sources in parallel, enabling automatic detections,

alerts and responses to events, as they emerge.

Based on Agent Vi's open architecture, pure software approach, Vi-System can be easily integrated with a wide range of edge devices and video management systems, in both new and existing surveillance networks.

Vi-System boasts the combined benefits of superior detection performance, high scalability, installation simplicity and ease of use, making Vi-System the most advanced, comprehensive and cost effective real-time video analytics solution on the market.



Vi-System's detection performance has been independently verified, with Vi-System (Ver 3.3 SP1) approved by i-LIDS as a primary detection system for operational alert use in sterile zone monitoring applications, following comprehensive testing by the UK Home Office Scientific Development Branch.

<u>Vi-Search</u> is an innovative video search software that performs automatic and rapid search, retrieval and analysis of specific video segments, events and data from vast amounts of recorded video.

Through Vi-Search, all video streams in a surveillance network are



analyzed as they are recorded, and events and features are indexed and stored. Using Vi-

Search's advanced and intuitive interface, users search for specific events and data which are retrieved automatically, replacing the time-consuming and ineffective alternative of manual review of recorded video.

Based on Agent Vi's open architecture, pure software approach, Vi-Search can be easily integrated with a wide range of edge devices and video management systems, in both new and existing surveillance networks.

Vi-Search allows true leveraging of stored video by enabling instantaneous forensic searches, analysis of motion patterns and extraction of statistical data for applications such as security, post-event analysis and business intelligence.

#### **Markets**

Agent Vi's video analytics solutions are deployed in multiple projects across a range of vertical markets including in Mass Transportation, City Surveillance, Critical Infrastructure / Utilities, Government Facilities, Highway Surveillance, Retail and more.

# Interview with Mr. Ariel Frischoff, VP Sales, EMEA & APAC, Agent Vi





"Agent Vi offers the most cost-effective and comprehensive VCA (video content analysis) solutions on the market today. The solutions are open platform, enabling customers to use the analytics with a variety of cameras and recording solutions, with minimum impact on the TCO.", said Mr. Ariel Frischoff, VP Sales, EMEA & APAC, Agent Vi on an exclusive interview given to Epicos.

# 1. Could you please describe the place of Agent Video Intelligence (Agent Vi) in the national and international market?

Agent Vi is positioned today as the global leader in video analytics solutions. This position is supported by Agent Vi's open architecture approach, which makes it the ideal choice for many installations looking to boast best of breed solutions. Our comprehensive product offering, which extends from our award-wining real-time detection system to our newly released video forensic software, and our global reach through certified partners and distribution channels, leaves no doubt that Agent Vi is the leading player in the intelligent video market.

## 2. Why someone should choose Agent Vi to do business?

Agent Vi offers the most cost-effective and comprehensive VCA (video content analysis) solutions on the market The solutions are open platform, enabling customers to use the analytics with a variety of cameras and recording solutions, with minimum impact on the TCO. In addition, Agent Vi's real-time analytics solution has been objectively verified, and is recognized by independent government agencies, such as the UK Home Office, which has approved Vi-System as a primary detection system for operational alert use under the i-LIDS program.



# 3. What are the main technological advantages of Agent Vi?

Agent Vi's open platform supports the market-leading cameras and encoders, and a few dozen NVR and VMS solutions, making Agent Vi's software an ideal option, no matter the existing infrastructure and equipment.

Agent Vi also offers the lowest TCO due to the unique, patented system architecture, which enables VCA on an unlimited number of cameras with minimum hardware costs.

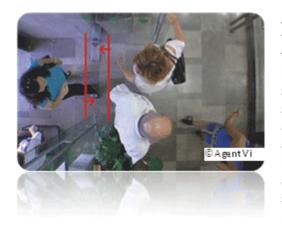
The solutions are also highly scalable – a server with a quad core processor can support up to 200 cameras running a variety of analytics tasks.

Furthermore, Agent Vi's products are future-proof, meaning that new features developed on the server side do not require upgrading of edge device firmware when there is a new product version released, or when there is a need to add additional analytics functions to an edge device.

# 4. Is the company currently investing in a new technology?

Yes. Agent Vi continuously expands its offering by adding new capabilities and adding new items to its product portfolio. For example, with the recent launch of Vi-Search, Agent Vi now offers analytics capabilities for recorded video, and not just for real-time video. This marks a paradigm shift in the video analytics market which has traditionally focused on real-time applications.

# 5. In which sectors of everyday life is Agent Vi activated?



Agent Vi's products are deployed the world over, across many different vertical markets. Main focus markets include transportation (airports and railways, traffic), seaports, surveillance, enterprise surveillance and retail/business intelligence applications. Recent projects have included the provision of over 1,000 analytics channels to a major Far East subway system, an installation to protect the facilities of the largest metropolitan public transportation

company in Italy, over 400 channels at a leading IT enterprise in India, over 430 channels for real-time detection across high speed train lines in China, and more.

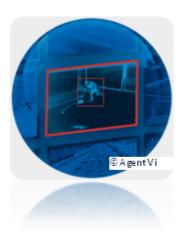


# 6. Could you please describe us the main products that Agent Vi is producing? What are the main characteristics of them?

Vi-System is Agent Vi's real-time detection and alert software, transforming standard surveillance networks into intelligent and effective detection and alert systems. By performing real-time analysis of the video stream, Vi-System identifies and generates alerts for a variety of user-defined events relating to people, vehicles and objects. Accordingly, Vi-System is used for a range of applications including security and perimeter protection, safety, traffic monitoring, asset protection and business intelligence.

For example, rather than relying on a security guard to pick up a suspicious incident by watching multiple camera screens, Vi-System can alert the security team to a suspicious object left on a train platform, a car stopped in a no-stopping zone and posing a safety risk, a person breaching the perimeter of a facility, or entering a secure zone that is off-limits, and can even alert to the removal of a valuable asset (for example, theft of a painting or a sculpture from a museum).

Vi-Search, Agent Vi's newest product, has a totally different focus – stored video, rather than real-time video stream. In the past, we have seen incidents (for example, the London subway attack) whereby following the incident the police called in reinforcements to sit and review hours upon hours of stored video in order to identify specific people, vehicles etc. Vi-Search overcomes this tedious manual review process, and enables automatic and effortless retrieval of information contained in the stored video. It offers an extensive set of intuitive search parameters, (which do not have to be defined in advance), including target type (person, vehicle,



object), event type (moving, stationary, crossing a line etc), search by color and size, search within specific time frames or on specific cameras, and more.

Vi-Search offers a range of business intelligence capabilities that are particularly relevant to the retail sector, such as measuring store traffic, identifying traffic paths and high density areas, measuring dwell time, and more. These capabilities are an excellent tool to inform decisions about merchandising, marketing and operations, including understanding where to place products for premium positioning in the store, or how many staff to allocate to different areas, and where to place them in line with store traffic trends.

# **Epicos Project Opportunities**

Epicos "Project Opportunities" provides a unique set of online tools enabling the structure, identification and implementation of comprehensive Offsets programs, through a searchable database. By



introducing different offset projects and ideas proposed by local A&D industry it ensures the optimum cost for Prime Contractors and reassures that the priorities of local industry are fully met...

## For Further Information Press Here

# Development of helicopter mounted advanced Hyper Spectral System to be used on various civil & military applications



A company focusing on hyper-spectral remote sensing technology is proposing the design and development of a unique electro-optical system to be mounted on helicopters to be used as automated cueing targeting system for attack helicopter as well as in Search and Rescue (SaR) missions.

### For Further Information Contact our ICO Department

Mail at: a-dimou@epicos.com

# UDP communication optimization for inter-UAV communications in modern Network Centric Warfare operations



A company excelling in the design and development of advanced real time data exchange solutions for inter-UAV communication requirements is proposing the installation of a new UDP smart gateway design providing hard real time and secure data exchange between application machines. The proposed system architecture supports specific requirements including: time-critical and mission-critical applications, limited bandwidth, hot redundancy and

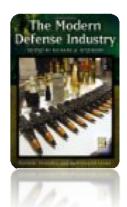
deterministic behavior. The system will fully support the new concepts for advanced Network Centric Warfare (NCW) operations using unmanned platforms.

## For Further Information Contact our ICO Department

Mail at: a-dimou@epicos.com



# The Modern Defense Industry: Political, Economic, and Technological Issues, by Richard A. Bitzinger



The global arms industry is a constantly changing phenomenon. It undergoes phases of growth and prosperity and phases of crisis and decline. Additionally, it involves thousands of players worldwide—from suppliers and producers to government and military procurers to shadowy figures that trade in the black market. This book is trying to explore, on a global scale, the various issues, concepts, problems, and controversies surrounding the rise of the modern defense industry. It addresses the period from 1945 to the present, covering the United States, Europe, Russia, China, Israel, and other important armsproducing and arms-procuring countries.

# Defence Procurement and Industry Policy: A small country perspective, by Stefan Markowski, Peter Hall, Robert Wylie



usually face.

Arms purchases are among the most expensive, technologically challenging and politically controversial decisions made by modern-day governments. Superpower spending on weapons systems is widely analysed and discussed. But defence procurement in smaller industrial countries involves different issues which receive less attention. This book is trying to present a general framework for understanding smaller country defence procurement supported by country, industry and project studies. Additionally, is not trying to focus exclusively on issues in economics theory, but rather to give answer to a wide variety of questions that defence procurement practitioners and policy- makers



# France 'in principle' ready to sell warship to Russia: Paris

France is "in principle" willing to sell an amphibious assault ship to Russia but no decision has yet been made and negotiations are continuing, a foreign ministry spokesman said Tuesday.

If the deal goes ahead, it would be the first such transfer of large-scale military technology from a NATO member to Moscow.

Ex-Soviet Baltic states Estonia and Lithuania have expressed concern that France is mulling a deal that would strengthen Russia's ability to intervene in the countries of its region, as it did in its 2008 war with Georgia.

The request to buy the ship "has been received positively in principle but its examination and talks are continuing to clarify the content of the Russians' expectations and the response of the French authorities," the foreign ministry spokesman told reporters in Paris.

Asked about Estonia and Lithuania's demand Monday that fellow NATO and EU member France explain its plans to sell the ship to Moscow, he replied: "We are in the same alliance."

Having initially approached France to discuss the sale of one Mistral-class helicopter carrier, Russia has now said it wants four of the modern 21,000-tonne vessels, a senior French defence ministry official said Monday.

Defence Minister Herve Morin defended the principle behind the planned sale, saying: "We cannot on one hand enlist Russia in building (European) security and at the same time consider that Russia has not profoundly changed since 1991."

The Mistral, the second largest warship in the French fleet, is a 200-metre (650-foot) amphibious assault vessel that can carry heavy-lift helicopters, landing craft, tanks and up to 900 commandos.

**Source:** 2009 AFP, Agence France-Presse (AFP)

# Boeing to Continue Providing F/A-18 Engineering Services to Royal Australian Air Force

WILLIAMTOWN, New South Wales, Feb. 8, 2010 -- Boeing Defence Australia, a wholly owned subsidiary of The Boeing Company [NYSE: BA], has been awarded a \$1.5 million contract for the provision of engineering support services for the Royal Australian Air Force's (RAAF) fleet of F/A-18A/B Hornet aircraft.

The 30-month contract, managed by the Tactical Fighter Systems Program Office (TFSPO) at RAAF Base Williamtown, requires Boeing Defence Australia to deliver repair plans for faults uncovered during F/A-18A/B Hornet maintenance.

"This contract maintains our F/A-18 engineering capability as it increases our overall business on the platform," said Brad Hume, Boeing Defence Australia F/A-18 program manager.

Boeing Defence Australia has delivered engineering support services to the TFSPO for the past six years. It also continues to perform Hornet Upgrade Phase 2.3, which involves upgrading the Electronic Warfare Self Protection Suite on 68 aircraft and modifying 76 wing Phase 2.3 be completed pylons. is expected tο in 2012. "The RAAF's decision to award this contract to us demonstrates their faith in Boeing's ability to support the F/A-18 platform," Hume said. "We will continue working closely with our customer to maintain the Hornet's air combat capability."

Under the new contract, engineering services will now be delivered under Boeing Defence Australia's Authorised Engineering Organisation (AEO) certificate.

Boeing Defence Australia, a wholly owned subsidiary of The Boeing Company and a business unit of Boeing Defense, Space & Security, is a leading Australian aerospace enterprise. With a world-class team of nearly 2,000 employees at 13 locations throughout Australia and two international sites, Boeing Defence Australia supports some of the largest and most complex defense projects in Australia.

A unit of The Boeing Company, Boeing Defense, Space & Security is one of the world's largest defense, space and security businesses specializing in innovative and capabilities-driven customer solutions, and the world's largest and most versatile manufacturer of military aircraft. Headquartered in St. Louis, Boeing Defense, Space & Security is a \$34 billion business with 68,000 employees worldwide.

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Source: Epicos, Boeing Defense, Space & Security

### SAS airline posts loss, plans job cuts

Shares in SAS Scandinavian Airlines plunged on Tuesday after it said it was planning to raise new capital and cut 650 jobs as part of an expanded cost-reduction plan.

The airline also posted worst than expected fourth quarter net losses, losing 1.3 billion kronor (176 million dollars, 128 million euros) instead of the 733 million expected by analysts surveyed by Dow Jones.

In 2008, the airline lost 2.79 billion kronor in the fourth quarter.

At around 1130 GMT, SAS shares had plunged 21 percent to 2.78 kronor in a nearly flat Stockholm Stock Exchange.

"What we plan is 650 full-time (job cuts) within the SAS Group," Elisabeth Manzi, SAS director of media relations, told AFP.

SAS has already axed thousands of jobs as part of its cost-cutting drive.

The airline reported that its traffic had decreased by 5.1 percent during January, with passenger numbers down 4.4 percent.

SAS also announced a rights issue of around five billion kronor, which follows a six-billion-kronor issue last year.

The airline, in which the Scandinavian countries are major stakeholders, has been hit by the rise of low-cost airline Norwegian and the plunge in passenger traffic numbers as a result of the global economic crisis.

"The sharp downturn in the economy led to an extremely large decline in business travel, which had a significant impact on the entire aviation industry," SAS said in its earnings statement.

"Market conditions deteriorated far more extensively than originally expected when the Core SAS strategy was initiated a year ago," it added, referring to the savings plan announced last February.

The cost cuts were therefore being increased by two billion kronor to 7.3 billion kronor, with most of the cuts falling this year, SAS said.

The airline's loss over the whole of 2009 was 2.95 billion kronor -- lower than the 6.36 billion kronor in 2008, and the company's sales were down 15 percent to 44.92 billion kronor.

Source: 2009 AFP, Agence France-Presse (AFP)

## **JAL to stay with American Airlines**

Japan Airlines, after declaring bankruptcy last month, has decided to keep its current tie-up with American Airlines and end talks to defect to Delta Air Lines, local media reported on Monday.

US giants American Airlines and Delta Air Lines have been competing to take a stake in ailing JAL despite its bankruptcy filing with 26 billion dollars of debt -- one of Japan's biggest ever corporate failures.

Japanese media had previously said JAL planned to switch to Delta, the world's biggest airline, and its SkyTeam airline alliance from American Airlines' Oneworld alliance as part of its recovery plan.

But JAL's new management and the government-run Enterprise Turnaround Initiative of Japan, which supervises the airline's restructuring, believe the switch would be costly and risky for JAL, the Asahi and other dailies said.

The embattled carrier feared that a switch to Atlanta-based Delta and SkyTeam would confuse its passengers and may not win antitrust immunity from US authorities because it would dominate the trans-Pacific market.

A JAL spokesman would not confirm the media reports, saying: "Nothing is decided on this issue and the reports are based on speculation."

American Airlines in a statement said that "until JAL officially announces its future alliance plans, it's inappropriate to comment."

"American Airlines and Oneworld continue to believe that a relationship with Oneworld is the best outcome for JAL, for Japan's national interests and for consumers travelling between Japan and the United States," it said.

The two US carriers have been circling embattled JAL for months, offering it large cash injections for a stake in the airline and cooperation on its lucrative Asian and wider international route networks.

American, the second largest US carrier, and Oneworld together with a private equity firm last month raised their offer to 1.4 billion from 1.1 billion dollars in capital against Delta's one billion dollars.

Thomas Horton, American's vice president, at the time promised to help bring "stability and certainty to Japan Airlines at a time when it is most needed, as it faces turbulent times over the coming weeks and months."

Fort Worth-based American said that by sticking with Oneworld, JAL stood to gain two billion dollars over the next three years from its links with alliance members, which also include British Airways, Qantas and Cathay Pacific.

JAL is hobbled by heavy costs stretching back to its days as a state-owned flag carrier, as well as a route network that includes flights to small domestic airports that are often unprofitable to service.

The airline appointed business guru Kazuo Inamori as its new chairman and has announced radical restructuring, including slashing more than 15,600 jobs, axing unprofitable routes and selling off some non-core assets.

JAL plans to tell Delta as early as this week that it will terminate the tie-up talks and then apply with American for anti-trust immunity with the US Department of Transportation this month, the Nikkei business daily said.

Source: 2009 AFP, Agence France-Presse (AFP)

### Russia prepares to launch U.S. telecoms satellite

MOSCOW, February 8 (RIA Novosti) - A Russian Proton-M rocket carrying a U.S. telecommunications satellite has been delivered to a launch pad at the Baikonur space

center in Kazakhstan in preparation for the February 12 launch. The carrier rocket will put into orbit the Intelsat-16 satellite, which was developed by Orbital Sciences Corporation for the Intelsat Ltd., a leading provider of satellite services worldwide. The Intelsat-16 satellite is equipped with 24 transponders and will provide telecommunications services to customers in Brazil and Mexico. Intelsat Ltd. operates the world's most extensive satellite network, comprising over 50 satellites. Russia last launched an Intelsat satellite in December last year.

Source: RIA Novosti