

Israeli Security Technology:

solutions from \$0.03 to \$3,000,000.00



Whilst the political situation in which Israel is ensconced is unenviable, the country's reputation for developing solutions to counter the resultant threat certainly is admired. With Israel's flag carrier, El Al, long regarded as the prime target for many terrorist organisations, the airline and the country itself have had to put security first. As a result, the country has been at the forefront of the aviation security technology revolution, developing solutions that respond to a multitude of threats at prices ranging from a few cents to millions of dollars. Philip Baum identifies some of the Israeli solutions that are likely to aid in the global fight against terror in the skies.

From surface-to-air missile avoidance systems to stickers bearing latent images for document security, Israel proffers solutions to the international marketplace for almost every aspect of aviation security. And, with many of the companies visited being start-ups, the signs are promising for this key sector of the Israeli economy.

In fact, according to Eran Sela of the Israel Export Institute "we know that our export sales of paramilitary goods exceed \$400 mil-

lion and could even be double that figure."

Mention Israel and aviation security in the same sentence and one pictures queues of passengers waiting to be questioned in airports. Strange then it seems that for a country so dependent on profiling that it should invest heavily in the development of technological solutions. The answer lies in the country's genuine belief that whatever measure one takes, it is simply another piece of the jigsaw. This was a view expressed by almost every manufacturer visited as each one quite candidly

admitted that their technology was useless as a standalone solution.

The Airlines

There is much talk about the "El Al" profiling system. However, whilst El Al may be Israel's national carrier, it does not own the profiling system. There is an agreement between the three key parties involved in aviation in Israel, being El Al, Arkia Airlines and the Israel Airport Authority, as to how the profiling system is implemented.

Above: D-TECT Technologies SDS-400 fluoroscopic X-ray screening system

Israel Airport Authority staff effect the programme for all carriers, including El Al, at Tel Aviv's Ben Gurion Airport Terminal 1. Furthermore, whilst most foreign carriers do not require their passengers to be profiled en route to Israel, all passengers are subjected to the process when they depart. Overseas, El Al personnel do implement the profiling system, primarily for Israel-bound flights. Yet, domestically, it is Arkia Airlines that takes responsibility for all profiling (save for Ben Gurion's Terminal 1) for all carriers, El Al included.

Arkia actually employs around 230 profilers around the country (Eilat, Ovda, Haifa, Tel Aviv Sde Dov, Rosh Pina, Qiryat Shemona and Ben Gurion Terminal 2), training them all at its own training centre. Staff receive six weeks initial training, followed by on-the-job training and then a qualification period. Yet even though Arkia sees no efficient alternative to passenger screening other than profiling, as the company views itself as a tourism organisation rather than just an airline it is also thinking outside the box. As a result it is keen to explore all business opportunities, many of which have an aviation security technology orientation.

Infrared Countermeasures

It was an Arkia jet that narrowly escaped being shot down by a surface-to-air missile as it departed Mombasa last November. Seemingly, the missiles were launched only 500 metres from their target – too short a distance for them to be able to “lock on” effectively.

It was not that incident that was the cause of the company's keenness to work towards a solution to counter that type of threat, as Arkia was already supporting the efforts of another Israeli company, Rafael, to adapt a military solution to the needs of commercial aviation. It was that incident, however, that alerted the world to the threat posed and prompted global interest in the science of infrared countermeasures. Furthermore, the sudden realisation by the world that it was pure myth that El Al (and Arkia) were equipped with infrared countermeasure systems, spurred Rafael on to turn myth into reality.

Rafael has been developing Directional Infrared Countermeasures (DIRCM) since

the early 1990's. Their target customer was, of course, the Israel Air Force. Ten years down the line and the AERO-GEM system (the military solution) has matured and has been flight-tested. Yet, the attacks of 11th September proved that there were no taboos when it came to terrorist targets, hence Rafael's resolve to develop a commercial solution. The result: the BRITENING system.

They had three key problems to overcome. First of all the thermal signature of the aircraft itself, given that a commercial jet is between 30 and 50 times larger than a helicopter and that the jamming energy must be greater than the signal energy. Secondly, they required FAA safety certification. The solution, therefore, had to be passive and not radiate anything. It had already been determined that a flare solution was never going to be acceptable in a commercial environment; just consider the potentially disastrous consequences of a false alarm resulting in flares being deployed, possibly shortly after an aircraft's departure from an airport whilst still over a densely populated area. Finally, there is an issue of “drag” given that the system sits on a turret, but Rafael has developed a retractable pod for customers who are especially concerned about this issue.

In March 2003 ground tests were carried out on an Arkia B-757 in the Negev desert. Interestingly, it was the same aircraft that was targeted in Mombasa...and with the same pilot at the controls. They simulated an attack from more than 1000 metres whilst the aircraft was at take-off thrust and generating its largest thermal signature. The tests were a complete success and flight tests are to be carried out on a B-737 next year.

It is estimated that the cost of deployment will be \$3 million for a one-off purchase, such as a Presidential aircraft, but once an airline is ordering ten or more



E.D.I.G.'s barometric chambers are located at airports around the globe

for its fleet, the unit cost will come down to around \$1 million.

Both Northrop Grumman and BAE Systems have developed DIRCM systems and Northrop has even, allegedly, live-fired on an aircraft, yet Rafael claim their system is much lighter than those of their competitors and is about a third of the price.

As to whether BRITENING does become a commercially viable product, much depends on the regulators. For as long as it is not mandated and the threat posed is deemed to be insufficient as to warrant such an expense, VIP aircraft are likely to be the only customers. A change in policy and Rafael will be ready to provide.

The only question they still have to resolve is that of the confidentiality of their jamming codes. Supply the codes to the “wrong” country, and you have negated the effectiveness of the solution. I guess that's where the Israelis will go back to profiling...only this time countries, rather than passengers!

Missile Avoidance

A cheaper solution to the surface-to-air missile threat lies, like so many things, in computer software. And when the software is developed by a group of El Al pilots, commercially known as Rontal, it is worthy of consideration.

Arkia pilots flying into the northern Israeli town of Qiryat Shemona have long faced the threat of surface-to-air missiles being launched from southern Lebanon, but it was the Mombasa attack that made Rontal realise the aviation potential of the product they had first developed for urban threat assessment and projection. Computer simulation, they argue, is not

new to aviation, so they have taken that premise and developed AirGuard.

AirGuard provides the authorities with the potential to identify possible launch sites for surface-to-air missiles. Based on this information they can take a range of precautionary measures ranging from the deployment of security personnel to that area to the alteration of an aircraft's arrival or departure corridor.

Rontal focuses on the threat posed to departing aircraft which are easier targets granted their known departure time and visibility at take off. Rontal's solution, based on the topography of the area surrounding an airport, establishes all potential launch sites from which terrorists could lock onto a target that is up to 8 nautical miles from the airfield (based on the real threat being until an aircraft reaches around 6000 feet). The software ignores the airport's own sterile area and focuses on the outlying areas in the departure corridor. The footprint of the threat zone decreases in width, the further one moves from the runway given that the aircraft will be gaining altitude all the time.

The software can be further enhanced to take into consideration the range of different missile types, the direction of the sun, amount of cloud cover and other metrological factors.

Barometric Chambers

E.D.I.G. Construction Management has been in existence since 1971 in the business of developing electricity and control solutions. Using this experience, the company has developed the Decompression Chamber that aids in the identification (and detonation) of an improvised explosive device controlled by a barometric device.

The chamber can actually be programmed to simulate up to four flights in one test and be run for as long as the airline so desires. Accordingly a cargo consignment, baggage container or even a single suitcase can be taken on a "virtual" flight where conditions inside the barometric chamber are equivalent to those inside the cargo hold of a real aircraft. Should an explosion occur, the chamber can contain a 1kg TNT blast.

Each chamber is tailor-made for E.D.I.G.

clients and around 30 are now deployed at airports around the world, including Bangkok, Johannesburg, Chicago, Nairobi, Hong Kong and Rome. The unit cost is between \$300,000 and \$500,000, and this includes a system that enables the detection of a radio frequency activated device.

Should a device explode, the manufacturers apologise that the chamber may be unsuited to further use. Then again, better that than a midair explosion...

Biological & Chemical Protection Chambers

Speaking of chambers, "The Gabriel" is one that every airport should have! Except that this time the chamber is for people rather than cargo. And, this time it is to counter the threat posed by biological or chemical attack rather than to detonate an explosive device on the ground. In other words, protection is the key...and Mifram is the supplier...

The Gabriel is a blast and bullet-proof BC protection mobile shelter for up to 25 people (who can remain there for six months) within a gas-free environment. It doubles as a communication shelter or command centre when, as is hoped, it is not needed for its prime purpose. The filtering system purifies the air and each unit is equipped with a chemical lavatory and sink that lead into an anti-biological sewage system. 400 litres of potable water can be stored in a stainless steel tank that operates by either gravitation or an electric pump. The price tag for a fully equipped shelter is only \$28,000 (\$37,000 if a gas-free air conditioning system with a silenced generator is added)

– a nominal investment for an airport that needs to ensure that it has one BC-proof control post.

Mifram also supplies secure checkpoints (the Protected Screening Module) to enable guards to safely screen potentially suicidal individuals. Designed to withstand a 10kg blast, the mobile checkpoints are basically two rooms: the guard can view the "passenger" from one and, via an interphone, give instructions should a full body search be necessary. Naturally, such units are only likely to be used when the perceived risk is extremely high, although they can also serve as mobile screening checkpoints equipped with X-ray and other screening technologies.

Latent Image Technology

Many regard document security as the first element of the passenger screening process and the detection of malafide documents is fundamental to almost all airlines security programmes. One of the most exciting developments in this area has come from Jerusalem-based Latent Image Technology (LIT).

E.D.I.G. Construction Management established in 1971 in the business of developing electricity and control solutions. Using this experience the company has developed **the Decompression Chamber**

- Decompression Chambers that aids the identification and detonation of an improvised explosive device controlled by a barometric device.
- The chamber can be programmed to simulate up to four flights in one test and run for as long as the airline desires.
- Suitable for cargo consignment, baggage container or single suitcases to be taken on a virtual flight where the conditions inside the barometric chamber are equivalent to those inside the cargo hold of a real aircraft.
- The chamber can contain up to a 1kg TNT Blast without any damage!
- The chambers can be tailor made for each clients requirements
- Installations include: Chicago, Nairobi, Hong Kong, Rome, Paris, New York, Bangkok and many other Airports

For further information on this product please contact the E.D.I.G team on tel + 972 35617510 fax + 972 3562 3375 or email: edig@edig.co.il



<http://www.edig.co.il/airlines.htm>

41 Gershon St, Tel Aviv, Israel



Latent image technology is an affordable yet effective method of enhancing document security

Currently, admittedly according to the manufacturers, their patented product is forgery-proof. Through a process developed over the last decade and given their expertise in physics, chemistry and thermodynamics, latent images are printed on polymers and remain invisible until examined by a polarising filter. The polymers undergo a chemical treatment that separates the molecules and then moves the molecules around to create a custom design. It is a technology that is used on the likes of Polaroid film, only, with the LIT solution, the polymers go through a fixation process to ensure that the molecules never return to their original state – in other words, the latent image is permanent.

The polymers are produced as stickers on rolls and vary in price depending on the size of the sticker. The smaller ones average at about \$0.03 each, whilst larger ones can be \$0.10 each.

The potential is huge given that LIT is the only company in the world offering such a solution. Moreover, it is a very user-friendly solution: verification time is averaged at 1/4 second through a cheap polarising filter. No longer do documents need to be held at awkward angles to view hidden images.

Furthermore, consider the market beyond aviation. Consumer products such as cosmetics, clothing and CDs, all known to be copied, can be easily branded as secure. In Israel, all tickets to football matches and to many major pop/rock concerts now carry the LIT product. In India, university diplomas and tax stamps. In Cuba, cigars. In China, alcoholic drinks. In Mexico and Guatemala, vehicle registration documents. And now LIT is turning its attention to the travel industry, with its need to cheaply

yet effectively secure not only passports but also airline tickets, boarding cards, airport tax vouchers and, arguably most important of all, aircraft spare parts.

It might have been the cheapest solution I saw, but in many respects it was the most exciting...

Screening the Unattended Bag

Hundreds of airports internationally are making use of Vidisco's FoXrayII and FoX Trekker Portable X-ray Inspection Systems to enable airport security personnel to take quick action in dealing with today's increased security threats.

Vidisco's PC-based Portable X-ray Systems are the smallest and lightest in the world. All system components are accommodated in one suitcase on wheels or a small backpack weighing less than 14 kg, including the X-ray source. Offering both large (17") and small (6") video camera units (VCU), these systems can be used to inspect suitcases already loaded or situated in cargo handling areas, to X-ray unattended suitcases in passenger terminals without moving the item, and to inspect the inside of an aircraft for hidden objects left behind by insiders for hijackers.

The principle of operating Tactical Portable X-ray Inspection Systems is that it enables bringing the inspection system to the suspect item, without needing to move the suspect item from its place – especially important for devices designed to detonate if moved or jolted. In addition, due to the fact that an operator can set-up the equipment in 1-2 minutes and receive real-time images, this translates into immediate response times, and minimal false evacuations!

Fluoroscopic X-ray

When an airline such as El Al goes out and buys new X-ray machines (for use at its overseas locations) from a previously internationally unknown manufacturer, our industry sits up and pays attention.

And that's exactly what D-TECT Technologies

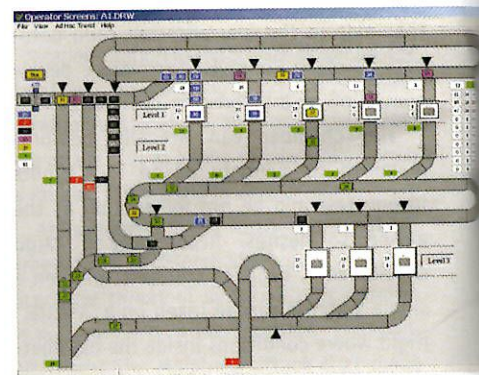
are hoping will happen given their first sales (preceding their impending launch!) of their SDS-400 fluoroscopic X-ray system.

The SOREQ Nuclear Research Centre of the Israeli Atomic Energy Commission developed the technology at the heart of these systems. Fluoroscopic X-ray technology, like others, utilises an X-ray emitting source. Yet, with the SDS-400, the generated beam of X-ray light is then focused on a heavily leaded glass plate to which a compound has been applied which glows or "fluoresces" when the X-ray light touches it. When an object, such as a suitcase, is placed between the source and the screen, the contents of the object are revealed.

Unlike other solutions, the image is not "colour coded", nor is it limited to the resolution of a digital display nor is it "interpreted" for the operator. The operator recognises objects as the magnified image moves across the screen. The user can zoom into an area of interest by moving the object closer to the X-ray source, slow the rate of motion or reverse direction. Thorough inspection is the result, without the necessity of opening potentially dangerous items.

If an item is classified as a possible threat when using explosive trace detection technology or conventional X-ray, it can be re-inspected quickly and thoroughly with the SDS-400 system. Secondary inspection with the SDS-400 system can aid with the decision whether to open the suspect item or call the bomb squad.

Motion, however, is the key. While viewing a moving image and at high



Left: SecureLogic's Integrated Baggage Handling Security System is a modular software tool providing comprehensive control logic for 100% Hold Baggage Screening operations

resolution, the operator can easily visualise the 3D nature of the item and can more easily recognise possible threats.

One of the most prominent features of the system is the large fluoroscopic screen, which at 35.5"x 51" far surpasses that of CRT or LCD screens.

Integrated Baggage Screening

The X-ray machine is only one part of the entire baggage screening process and integrating the technology into the larger system is the real challenge.

The deployment of 100% screening of checked baggage frequently raises the ongoing dilemma between high throughput and high detection reliability. There is an inherent trade-off between the speed of scanning luggage and the accuracy of the scans.

Providing an innovative solution to this challenge is SecureLogic Ltd – a joint venture between veteran baggage handling solution provider, SpaceLogic Ltd. and Dolev Consultants. Combining extensive experience and know-how in baggage handling logic control software and screening technologies, they teamed up five years ago to develop integrated baggage handling security solutions for the aviation industry. One of the products that emerged from this unique integration of capabilities is IBHS® – Integrated Baggage Handling Security System. Designed as a modular software tool-kit, IBHS provides comprehensive control logic for 100% Hold Baggage Screening (HBS) operations.

The essence of the IBHS software lies in the profiling system, only with one major difference – this time it is baggage that is being profiled rather than passengers. SecureLogic's solution takes the relevant regulator's risk analysis process (rather than dictating it), be it based on profiling, CAPPs or other risk parameters such as destination, airline or even random bag designation for more stringent searches, and adapts the screening level to the risk level. The software differs from most hold baggage screening systems, as not only does it offer an overall control solution but also it discretely routes each and every bag through a unique screening process. This core feature ensures that screening intensity fits the perceived risk level. Therefore

Level 1 screening for one bag may be different to Level 1 screening for another. So, for example, if risk parameters (as defined by the regulator) for a given bag require that the bag be subjected to CT inspection as Level 1 then the software will direct the specific bag to the CT scanner, possibly bypassing the AT X-ray machine used for other bags of lower risk as Level 1. Each machine therefore may be used as Level 1, 2 or 3, as defined for the specific risk level, when needed, resulting in an overall much more efficient system. However, the user can also set the system up in such a way as to, during quieter periods, direct bags through the longest route based on the premise that if the equipment is there

and not being used, why not effect an extra security check? Extending the current capacity of traditional human profiling, IBHS automates the Israeli concept of adjusting the intensity of the security measure to the perceived risk.

Perimeter Fencing

Whilst there has been much focus on passenger screening, airport perimeter security remains a key concern and a number of Israeli companies are very active in this field.

D-Fence is a company making a name for itself by proffering solutions that combine security with architectural design. D-Fence claims to manufacture the only decorative

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electronic fence in the world, appropriately named D-Corative! They aim to turn fences into something beautiful and possibly something that isn't even seen to be a security fence at all.

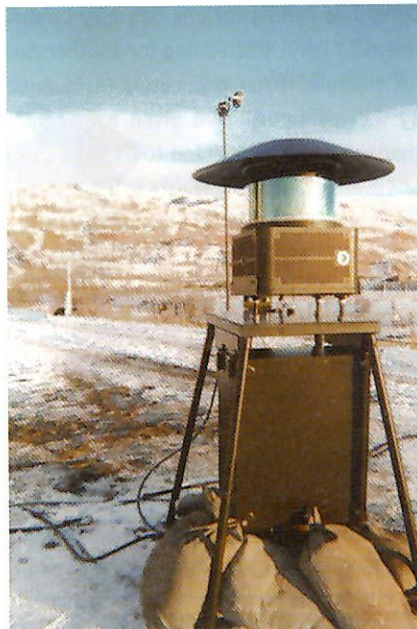
Yet, their taut wire intrusion detection system – the NIR – is their number one product. And, their securing of the Ben Gurion 2000 project to provide fencing for the new terminal and facilities at Tel Aviv's airports is obviously a major coup. Yang Yang airport in Korea has also installed a D-Fence taut wire fence, but having the world's securest airport as a client is hard to match.

NIR is based on sensor posts, each one containing an electronic processor unit which converts analogue signals from the wire sensors installed on the posts into digital signals. The processor unit analyses the signals from the sensors and will cause an alarm at the control unit should anybody attempt to climb over, cut through or switch off the wires. Impressively, the sensors come with a lifetime guarantee.

El-Far Electronics Ltd. focus on the intrusion system rather than the fence itself and have a solution based on reflected wave technology, which offers a radar-like solution to enable the identification of an alarm incident within 20 metres. This perimeter intrusion detection system (PIDS) has been supplied by El-Far to both Lisbon and Porto airports in Portugal.

GM Advanced Security Technologies offers an electric fencing solution that is entirely digital. The fence has high and low voltage wires ensuring that all the wires on the fence create alarms (and give the potential intruder a nasty shock) rather than alternate wires; the alarm message is sent to the control unit by wireless communication. It is cheaper than the taut wire option, yet the company has yet to venture into the airport market.

No article on Israeli security technology would be complete without reference to Magal, one of the country's leading security exporters for over 30 years primarily known for its fencing and associated PIDS systems. Recent airport projects have included Bucharest in Romania and Baku in Azerbaijan.



Left: Laserguard's LGS intrusion detection system at Salt Lake

Intrusion Detection

Want to protect an aircraft overseas and not rely on that airport's perimeter fencing, why not consider Laser Guard?

Established six years ago by a group of engineers, the Laser Guard Sensor (LGS) option creates a virtual invisible fence screening an area 300 metres in diameter. Easily transportable, weighing only 16kg and priced at \$15,000 to \$20,000 per unit, the product can be easily carried on board aircraft to foreign lands where security is suspect. Even an airport power source is not required given that the unit can run off a single car battery for 24-30 hours, or even be equipped with a solar panel.

The LGS incorporates two laser range-finders (LRF) in an environmentally sealed housing. As the LRF rotates it sends out laser pulses and, by manipulating the return pulse, learns the position of existing objects in the secure area. As the LGS continues to operate it continuously adapts the algorithm to allow for natural changes in area caused by rain, wind, sunrise, sunset etc. Once an intruder enters the area the LGS identifies that the cause is not an environmental one and initiates an alarm.

The LGS is a fully computerised system that can incorporate CCTV and other type of security peripherals so desired as an add-on by the customer.

The system is already in use at Kirkland Air Force base in the USA, at various sites

in Japan and at the French ports of Calais and Le Havre.

Also active in this field is Ortek, a subsidiary of Elbit Systems, who market their passive infrared Automatic Detection IR System (ADIR) for the same 360o surveillance yet with alarm verification supported by the viewing of thermal images displayed on the control unit.

Video Communication

It's all very well to have intrusion detection systems, but ensuring that the security personnel can respond appropriately is vital too.

Buzz VC, formed in 1998, specialise in remote video communication, yet the founders have been developing image processing technology since 1985. They offer the software to control remote sites, such as those situated along a perimeter fence, from a central control room. An open system architecture is essential and Buzz has continuously strived to integrate CCTV with other technologies. They are now actively working with two other Israeli companies, MATE on facial recognition and HADAS on acoustic sensors that would identify people throwing packages over a fence.

Yet CCTV remains their key market and the ability to provide customers with the means to monitor any camera, any time from anywhere remains their goal.

MAVIX contends that "information is never the problem, it's what you do with it." In any given security system there is an abundance of information and MAVIX, through their MediaRacer range, aims to bring information to the control room only when it is required and, even then, to channel it to the appropriate authority to respond to the incident.

MAVIX specialises in digital surveillance over IP networks and, whilst airports are not yet IP-based, it is a trend they will likely follow. Indeed, they have been involved in a number of transportation security projects.

In Sydney, in advance of the Olympics, the Australian government decided to upgrade the security for world-famous Sydney Ferries. The resulting system net-

worked video cameras installed at each of the 47 ferry wharves, with each wharf equipped with up to 16 cameras as well as public address systems and emergency call intercoms. All video signals, and the audio communications, were digitised, compressed and transmitted by MAVIX Gateways to the two control rooms.

In Belgium the Flemish government decided to monitor and operate the locks along the Zeekanaal from one control centre whilst ensuring neither safety nor security were compromised for users of the canals. Around 200 hi resolution, pan tilt and zoom (PTZ) cameras were installed at 30 locations along the canals, each one connected to MediaRacer 1000 units to ensure full motion video that could be transmitted back to the control centre.

And, for an aviation example, the Venezuelan authorities decision to upgrade security at Maiqueita Airport brought MAVIX the contract to connect the control unit to 500 video cameras, 400 access control sensors and 1000 alarms.

CCTV

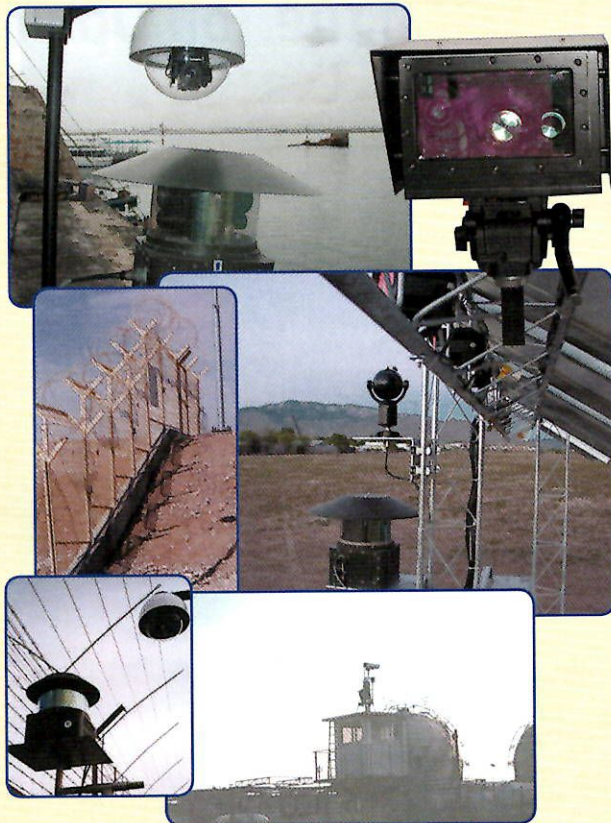
CCTV goes hand in hand with intrusion detection and never has it been so graphically demonstrated than by ioIMAGE with their TotalTrack product. Unlike many video motion detection (VMD) solutions, TotalTrack is based on 3D analysis. Accordingly, the system does not get confused between a bird that is close up and a car that is far away even though they may appear the same size on the screen.

ioIMAGE's quest is to make the camera smarter and reduce the number of false alarms for which VMD solutions are notorious. Accordingly they view each pixel on the screen as an "object" to be monitored, so even crowded environments are not problematic. And detection is not the end of the story, as once an intruder is identified a tracking system kicks in to follow their every movement.

TotalTrack has probably undergone one of the toughest trials possible. Installed at the Israeli Knesset (parliament) between February and March 2003, not only was the site a high security challenge but also

the weather extremes experienced, including heavy snow and high winds, put the system through its paces. But the resulting Knesset report concluded that, "The system detected all intrusion attempts by highly expert intruders (walking, running, regular and extremely slow crawling, as well as crawling under a blanket). Detection was almost immediate as soon as the intruders were within visual range. The system identified intruders at large distances, under difficult lighting and snow conditions, even when they were almost undetectable by the human eye. In the final weeks of the test, the number of false alarms was almost negligible, averaging one per camera every two days." Impressive results and one for the portfolio...

Nice Systems is reasonably well known within the aviation community although perhaps more for their audio solutions than CCTV. That said, Nice has secured a sizeable contract in Miami for its NiceVision's real-time video recording an analysis system. Intelligent software again forms the mainstay of the product and the



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Laser Guard Security Systems are totally adaptable to fit your individual security needs

The Laser Guard Sensor (LGS) is an advanced sensor utilizing state-of-the-art laser technology for the detection of human intruders into a secured area. The LGS is most suitable for stationary and rapid deployment applications and can also function as a "forward looking" sensor, providing depth to the perimeter security system and pre alarm alert.

The LGS can provide the distance and azimuth of the intruder. With this data CCTV cameras, projector lights, etc. can be "slaved" to the LGS and follow/track the intruder and the incident can be recorded. The LGS, in various system configurations, has been installed in some major sensitive sites having met the needs and application requirements of every individual site (in U.S.A., Japan, France, Israel and Belgium).

Laser Cross Line System - CLD

The Laser Cross Line System consist of an Laser Cross Line Detector, with an integral Video Camera and Automatic Record Report Program. The System can be integrated with additional Laser Cross Line Detector, Doppler Radar or Microwave Barrier.

Fence Gard™

Fence protection system features tuned piezoelectric sensors and zone processors. Typical installations use multiple individual reporting zones for effective operational reporting and response Fence Gard™ protects assets of industrial/commercial applications, airfields, military sites, storage depots and utility water/power/sewer installations/ Its easy installation and operation from prime or solar battery power makes Fence Gard™ an excellent system to secure the temporary fencing around construction and other sites.

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Zamir's licence plate recognition system at Tel Aviv's Ben Gurion airport

solution provides for more than simple motion and/or intruder detection.

Unattended baggage, unauthorised vehicles stopping in front of terminals and passengers and/or staff moving the wrong way through a checkpoint can all be easily identified. NiceVision can also serve as an evidential tool by the monitoring of X-ray checkpoints to reduce fraudulent claims of theft by screeners and as a way of capturing images of deplaning passengers as an aid in immigration authority attempts to identify asylum seekers' carrier of arrival.

Licence plate recognition (LPR) is fast becoming a sought after solution for air-

ports wishing to control the access of vehicles to sterile or controlled zones. Zamir Recognition System Ltd. has been successful in developing and supplying such LPR systems widely to the airport community including at Ben Gurion, Fiumicino Airport, Taipei and Sde Dov.

Vigilant Technology also caters for the aviation community with its digital video recording installations at Salt Lake City, Houston, Buenos Aires and Tel Aviv's Ben Gurion airports.

Integration Is Key

Drawing together all the airport access control and surveillance components are companies like the Mer Group. Having now secured the SAIC/Siemens contract for the Athens Olympic village and venues (together with the seaports), Mer is likely to become a major player in the airport security integration marketplace. In fact it already has installations in Buenos Aires, Hannover and London Heathrow as well as at all Israel Air Force bases.

Integration is not only a matter of

identifying the best technologies, many of which I have referred to earlier. It is also a case of, using Mer's own terminology, "listening, probing and evaluating". Off-the-shelf solutions are rarely suited to the highly variable demands of airfields and the design of a successful solution is very much dependant upon establishing the customer's needs through the asking of appropriate questions and designing an optimal solution.

Responding to that need for a flexible platform onto which the security components can be mounted is the Mer Group's Secure-M Command and Control Management System, one method of ensuring the efficient management of all security assets and resources.

Conclusion

This article could never have provided a detailed description of any one technology, but it has, hopefully, piqued your interest in certain areas and demonstrated at the same time the wide scope of the aviation security industry. ☺

Security From the Top Down

Mer's system integration skills provide you with multi-faceted solutions that respond to today's potential security threats.

Airport Security
Mer provides complete security systems to airport authorities that cover terminal buildings, gate areas, runway and service areas, parking lots and perimeters.

Our video-based techniques incorporate access control, motion and non-motion detection, license plate recognition, automatic face recognition and other biometric applications.

"Secure-M" – Mer Management Command and Control System

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- most advanced security technologies and solutions.
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