

Police Aviation News

©Police Aviation Research

Special Helitech/Milipol 2007

IPAR

HELITECH - U.K.
Duxford, Cambridge

Paris Expo

MILIPOL - FRANCE



PAN – [POLICE AVIATION NEWS](#) is published monthly by
INTERNATIONAL POLICE AVIATION RESEARCH
7 Windmill Close, Honey Lane, Waltham Abbey, Essex EN9 3BQ UK
Main: +44 1992 714162 **Cell:** +44 7778 296650 **Skype:** Bryn.Elliott
Bryn Elliott **E-mail:** editor@policeaviationnews.com

Bob Crowe
Digital Downlink
Specialist Design
L3 Wescam
Innovative Downlink Solutions
Power in a box
Interactive data-stream
Showing the way
Turning the blades
Airborne Law Enforcement Association
European Law Enforcement Association
Sindacato Personale Aeronavigante Della Polizia

www.bobcroweaircraft.com
www.bms-inc.com
www.enterprisecontrol.co.uk
www.wescam.com
www.mrcsecurity.com
www.powervamp.com
www.imagebase.co.uk
www.skyforceobserver.com
www.turbomeca.com
www.alea.org
www.pacenet.info
www.uppolizia.it

HELITECH 2007

IMPERIAL WAR MUSEUM DUXFORD UK

2-4 October 2007

Helitech is a commercial aviation showcase with little military content. It is certainly no law enforcement showcase. This year though there is little doubt that the centre of attention was a single example of the Metropolitan Police Eurocopter EC145 fleet of three. It is not to say that no-one paid attention to the other interesting types on view, but it was clear that this time around the area immediately close to G-MPSB was invariably crowded during opening hours.



This years show was about the unexplained absences as much as anything. This years HAI show in Florida majored on the Sikorsky S92 for the British Coastguard but now the training section of the programme has started in earnest [thereby keeping the appearance of the actual S92 off the menu] there seemed little reason for the absence of CHC the current operators of the service. Bristow were there promoting their other presences in the world. One example of the S92 was at the show, an Air Harrods sponsored machine in VIP trim.

AgustaWestland exhibited an EMS/SAR variant of the AW139 carrying Helisureste markings [see cover]. A similar type will eventually enter service with the Coastguard



A mock-up of the AW109 Grand featured a new seating configuration of three forward facing rows of seats offering crashworthy features. The crashworthy forward facing seating layout for the Grand provides two rows of three forward facing seats in the passenger cabin as option to the standard three forward and three aft facing seat layout. The layout provides a 31 inch (79 cm), aft row and 35 in (89 cm) forward row seat pitch, providing excellent leg-room even for tall passengers. The new layout is expected to be attractive to offshore operators as well as the corporate transport and air charter markets. Fitting JAR standard crashworthy seats in the 109 family has long been seen as difficult if not impossible due to the cabin architecture, the mock-up shows otherwise.



Reims F406 Land & Sea Surveillance

The logical economical choice of many operators
Police, Fisheries, Coastguard, EMINT, EEZ patrol.

Recent sales and deliveries
Serial No. 90, 91, 92, 93, 94, 95

Bob Crowe Aircraft Sales Ltd
Tel: +44 (0)1234 750442
www.bobcroweaircraft.com
sales@bobcroweaircraft.com





Although AgustaWestland had a presence at the show it was relatively low key with the majority of the promotion being left to their UK representative, Northampton based Sloane Helicopters.

Promoted by Sloane the AW109 Power is used for air ambulance, police and military communications flying in the UK. In April 2006 three AW109 Powers entered service with 32 (The Royal) Squadron to provide transport services for military and government officials under a COMR (Civil Owned Military Registered) contract.

Sloane Helicopters have now been the UK and Republic of Ireland distributor of AgustaWestland's commercial range of helicopters for 12 years with maintenance and customer support facilities located at Sywell Aerodrome, Northamptonshire and St Angelo Airport, Northern Ireland. Strong customer demand led Sloane Helicopters to place an order for 44 helicopters in January 2006.

The background buzz was about new orders for the police and all of the likely bidders had their version of the requirement. Basically it is the same story already carried in PAN about the CAA perceived need to withdraw from service five of the early EC135T1 'Classic' police aircraft by 2010. The need is driven by these aircraft lacking an autopilot for IFR. The Home Office has issued a request for proposals from industry. Even that simple matter was mired in mild confusion at show time over numbers. The original requirement was for five existing aircraft [Central Counties, North Wales, Suffolk, Chiltern and North East] but that clear cut case was muddled when Central Counties seemed reticent to dispose of an aircraft that was to their minds quite adequate and well within the ownership period of their original business plan. That took it down to four except that a new contender appeared in the shape of Cheshire who now wish to move from fixed wing to helicopter. So, depending on a decision by Central Counties [Staffordshire] later this month the number of new UK police airframes up for bids is five - or six. That will leave just Hampshire as a pure fixed wing operator in the

UK for the time being.

Was it perhaps a sign of the times that BN Aircraft, a company no stranger to Helitech in its own right, was trading at the show under its Thruxton based subsidiary BN Helicopters. Readers may recall that last year this supposed 'all helicopter' event featured a BN Islander aircraft demonstrating a Selex sensor suite.

Eurocopter and its UK distributor, McAlpine Helicopters Ltd., were present at Helitech with a joint booth (No. 1106) and a strong line-up of its state-of-the-art helicopters in the Static Display. One of the three EC145s of the London Metropolitan Police G-MPSB was joined by examples of each of the current Eurocopter latest generation of private and corporate helicopters, all of them customer aircraft – an EC120, EC130, EC135 and EC155.

Eurocopter claims a market share in the UK and Ireland of 73% in the police and law enforcement segment, 73% in the EMS market and around 50% in the corporate/private segment. Police and air ambulance support in Britain has never been based on locally manufactured helicopters, it has been the manufacturers of Europe and the US that have vied for the market. Since operations settled on twin-engine power it has been Eurocopter models that have led the fleet. Over the past 25 years the BO105, AS355 and BK117 and, more recently, the EC135 and the EC145 have held sway. Like it or not the EC135 is the reference light-twin helicopter for police surveillance throughout the British Isles. In the future things might change with a resurgent MD, AgustaWestland and the promising Bell 429.

Meanwhile the larger EC145 nominally a complementary helicopter platform to the EC135, offers greater weight lifting and space to the options. With the unthinkable consequence of crash in the background it also introduces a CVR to police aviation. These will be added to the fleet progressively.



Maximum Imaging Surveillance Technology

M.I.S.T.® ...anything lately?

For over a decade, **RDDS** has provided Police, SAR and Military Organisations throughout the U.K. and the world with the proprietary **M.I.S.T.** image enhancement system, helping these vital organisations see the way clear to accomplish their missions.

Building on the success of this pioneering technology, **RDDS** introduces a new range of products including:

- HD multifunctional displays
- Drop-in LCD replacements for 9" CRT monitors

RDDS, the **FIRST** choice for vision-enhanced airborne surveillance systems, is still the **CLEAR** choice.

Email: sales@rdds.co.uk Tel: +44 1843 233030 Web: rdds.co.uk

RDDS

Mission Critical
R&D Design Services Ltd

Star Lane, Margate, Kent, CT9 4ED • Registered in England: 03414444



All of the systems to be found on the EC145 fleet are increasingly being employed across police aviation and indeed recently delivered MD Explorer's were refurbished by drawing extensively on the technology that put the new EC145 fleet up among 'the most advanced police helicopter' class. Such accolades are deserved, but they are a transitory thing – another one will come along in a few months. At the present time the technology that transforms the basic aircraft into 'most advanced' comes from a who's who list of integrator companies, all of whom were in the halls – Skyquest, Skyforce [Honeywell], Wescam, FSI being the better known.

Eurocopter announced – confirmed anyway - the sale of an EC145 to the Devon & Cornwall Constabulary based in Exeter. The helicopter will be broadly similar to the Metropolitan Police examples but is likely to have many detail differences. It is due for delivery in around two years time. The Devon operation is going to be a major melting pot in emergency services aviation in the future. With the police tying in with the co-located air ambulance a whole tranche of issues over engineering and pilotage will emerge over the coming months. What actually happens in Devon will certainly have major influences in other operations.

Specialist Aviation Services [SAS] the group that encompasses Police Aviation Services [PAS] and Medical Aviation Services [MAS], has enjoyed a record year of achievement in its modifications business, having undertaken three full surveillance system upgrades and delivered several design "firsts".

As reported recently Cheshire Police have taken delivery of a new MX-15 based surveillance system on their BN Islander, whilst Humberside Police and West Yorkshire Police have taken delivery of the first HD-ready camera systems on their MD Explorers. The pair are currently operating with interim Star Safire III sensor gimbals, the installs have been designed to accept FSI's new Star Safire HD, the first being delivered during Helitech week. All aircraft are equipped with SkyQuest touch-screen monitors and digital video systems. These are systems also found in the new EC145's.

SAS has added several other firsts to its portfolio of system solutions this year including the first tetra radio installs for UK Air Ambulance operators and its first CVR/FDR installs for Bell 412 operators using L3's Madras system.

Other aircraft types which have recently benefited from SAS' extensive design, manufacture and install approvals have included AS 355, Bo 105, BK 117 and EC135.

At the show SAS were exhibiting the former West Midlands police MD900 Explorer in its new guise as the Surrey and Sussex air ambulance G-KSSH. On day two it was undertaking flights for a chosen few – including a number from the ambulance charity. A fair bit of work remains to be undertaken on the machine – it may have had the sensor turret removed from the nose but still had many police role features sprouting from under the floor and was awaiting the medical fit. The finished product will be quite a bit different.

SAS represent the emergency services aspirations of MD Helicopters, a company still inexorably climbing their way out of past troubles. Lynn Tilton the MD CEO was in town for the show and she continues to talk up the progress of the company in improving customer support and care. Generally the situation is looking good again but Tilton's Patriarch Partners have been at the helm for three years now to get to this level. It is not all good news – despite the vast sums spent on turning the problems around – but there are signs of improvement. The actual numbers of new airframe deliveries this year are unlikely to meet earlier predictions but the shortfall looks to be small. More problematical is that the return of



widespread customer confidence can be expected to be a long time coming. It is tempting to say that those operators with an investment in large fleets of MD's or spares will stay with the product but the lesson of Phoenix Police in Arizona disproved that in a big way. They got out of their large MD920N fleet in desperation and vowed never to buy a one type fleet ever again. Fortunately the sheer number of conventional MD500 helicopters in the USA has overcome any tendency for the MD line to disappear and has also served to provide a good basis for the new management to climb up from.



Enterprise Control Systems Limited

Specialist design through innovation and technology

Queen's Award for Enterprise: Innovation 2007



Digital Video Airborne Systems, COFDM Tactical Data Video Links, Portable Receiving Systems, Observation Networks



Tailormade Solutions Worldwide

Digital COFDM downlink upgrade for Strathclyde Police







MD Helicopters was again at Helitech. The presence was somewhat low key but it did include some familiar faces, including Lynn Tilton above right.

Aircraft on show included both of the MD Notar types [left]

Honeywell's Skyforce Division exhibited its Observer System which has been upgraded in 2007 to offer a Search & Rescue (SAR) suite of interfaces which extends its already comprehensive

range of Airborne Law Enforcement (ALE) capabilities.

Honeywell also introduced a new multi-year support package specifically tailored for Observer users who cannot afford down time and want a guaranteed through life operating cost. The Support Package, which is being adopted by a number of UK users offers:

- Inclusive Parts and Labour for all factory repairs during the Agreement Life
- Loan Line Replaceable Units from the factory on priority basis.
- Free Operating Software upgrades and Service Bulletin implementations.
- Field Service Engineering support on a global location basis.
- Refresher Training on request annually

The support package runs from the end of the current 2 year warranty period and can be fixed for a further 3 years to give unbroken 5 year turn key support, for further details contact: Skyforce Avionics Ltd – Sadie Jones email sadie@skyforce.co.uk or +44 1243 783763

A Picture is Worth a Thousand Words!

Complete Air to Ground Microwave Systems to Suit your Needs

The Downlink Experts

Tel: 858-391-3050 • Fax: 858-391-3049 • Email: dept500@bms-inc.com • Broadcast Microwave Services, Inc.

Fifty years on from the launch of the first ever man-made satellite, Sputnik, SkyTrac Systems, the world leader in flight following and SATCOM solutions based upon the successors to the Russian spacecraft were at Helitech with their European distributor the European rescue organization Deutsche Rettungsflugwacht e.V. (DRF).

SkyTrac Systems has collaborated with DRF since 2005 to develop software ideally suited to the fleet tracking requirements of emergency sectors such as that air rescue, air medical, and airborne law enforcement. The product though is a permanent fit, relatively complex and costly.

On the other side of 'flight following' technology was a New Zealand sourced product based on economy called Spider Tracks. The *spider tracking* unit is a compact, self contained unit that only requires an 10-32V DC power supply to operate. The spider is supplied with a cigarette lighter plug for easy connection to the commonly available power socket or it can be hard wired into whatever type of vehicle is selected. If the vehicle is a helicopter the economy of scale becomes vast. The light-weight design (360g) enables the *spider* to be held in a suitable position with Velcro.

The *spider* contains a GPS receiver and a satellite antenna and beyond that only needs a view of the sky that can often be provided by simply mounting it on the dashboard.

Once switched on the unit provides the ability to track the aircraft at base by simple use of a normal personal computer. In an industry where everything is deemed to be expensive the asked retail price of the unit - £1,225 or \$2,500 before bulk discounts is miniscule. Using the Iridium based systems costs £10 each month plus £1.20 per flight hour and it provides a permanent record of every flight undertaken. www.spidertracks.com

At the US Heli-Expo shows one of the largest stands is that of DART Helicopter Services [DHS], necessarily large to display the vast range of products the company manufactures and represents.

With private, law enforcement and military rotorcraft operators in Europe taking delivery of every helicopter coming off the assembly line, accessory manufacturer and distributor DART Helicopter Services is keeping pace by earning European Aviation Safety Agency (EASA) certification for an increasing list of products.

With more than 1,300 products in its catalogue, DHS is one of the world's largest manufacturers and marketers of helicopter accessories. Each of the individual accessories that impact the operation of the helicopter must be certificated as safe by the regulatory agency for the country where the helicopter operates. EASA is the agency for European nations, just as the Federal Aviation Administration and Transport Canada are the regulatory agencies for the United States and Canada.

The aim of DHS is to provide products that reduce the time and cost of maintenance and that enable operators to obtain greater utilisation from their aircraft in the European operational environment.

A set of emergency floats may require 12 to 16 months and several hundred thousand dollars to design, produce and have certified in the United States. While EASA may accept some of the documentation developed in the US certification process, the data must be reviewed and additional testing and evaluation may be required, which adds to the time and expense before the product is approved for use in Europe.

To date DHS say the 100 of the accessories in their current catalog have earned European approval. These have been a mix of direct EASA certification and items certified by separate European nations prior to the creation of EASA. Additional products are expected to win EASA approval in the near future.

DHS have received EASA approvals for many of their Bell Medium and Robinson products. This makes available to European operators items including Cabin Door Roller Kits, Cabin Door Handles, Door Support Kit, Bearing Overhaul Kit, Shoulder Harness Kits, Emergency Dual Cargo Release and Replacement Windows.

At Helitech the DHS presence was more modest, however that did not greatly reduce the number of announcements Dart promulgated as their product lines are granted EASA approvals for the European market. sales@darthelicopterservices.com



Californian law enforcement equipment supplier Tyler Camera Systems were first footing at Helitech. The company has a background in producing camera mounts and movie services but they have an interesting range of airborne law enforcement equipment that is becoming increasingly familiar to US eyes – it also represents a technology area with a likely interest to the European market. What they do not yet have is the necessary EASA certification that will open the door to this wider market.

The primary product is the Tyler Special Operations Platform [TSOP], a lightweight external freight and personnel carrier that is regularly in use on US AS350 AStars, Bell 207/407 and similar types. A clamp on addition to the skid system of helicopters the seemingly simple arrangement of tubes that provides seating and footrest support. It also offers the potential to employ a lightweight ballistic protection.

TSOP improves the safety margins associated with carrying special weapons and tactics personnel externally in that it provides a secure seat offering seat belts. Lacking the EASA certification the TSOP has fortunately found a law enforcement niche in Denmark. The Danish police do not have their own air support capability and rely upon the use of military AS350 helicopters operated under military rules. The Danes have bought TSOP, serving to increase pressure on the European market to at least consider the equipment. It is one thing to fly TSOP on a military machine under military rules but something entirely different to present EASA with a double issue of both new equipment and external passengers. It may have looked smart and macho to fly armed officers into a situation standing on the skids but most of the individual European certification authorities were



dead set against it. Possibly the newer unified EASA might eventually be persuaded to have a softer attitude to such activities. In the meantime Tyler can but count its Danish blessings and develop the product to a wider range of airframes. On display at the show was a new TSOP intended for the Eurocopter EC145/BK117C2 – clearly a type more in keeping with modern police air support. www.tylertech.net

A very new face in the hall at Helitech was Christian Hamel. He has taken up the appointment of Chief Executive Officer Microturbo and Turbomeca Limited, in Fareham, Hampshire with effect from the 1st October 2007. Previously holding the position of Director Commercial Strategy Aero Engines at Turbomeca Bordes, Christian Hamel brings a wealth of knowledge and experience to the UK market.

Despite the poor weather record in Britain aircraft covers remain a rarity within the emergency services air fleet so finding the Metropolitan Police EC145 helicopter covered in what was clearly a custom manufactured cover was something of a surprise and one only encountered by early risers attending the event. Come the sun the product was withdrawn from the view of the visitors. [image page 16].

The company that broke the mould on this dearth of covers is Air Covers based in the UK Midlands and it is the performance of the product that has clearly overcome earlier reticence in buying such covers.

The company offers customers a snugly fitting product that can be fitted in one minute and removed in thirty seconds using only one person. Clearly such performance is an important advantage when related to emergency service machines on standby in the open.

At the official launch event for the three Eurocopter EC145's in the summer the Metropolitan Police Commissioner, Sir Ian Blair, thanked the consortium of sub-contractors, including Air Covers, for their involvement in the project. Air Covers delivered two of the £1,200 [\$2,400] covers to the police air unit ahead of schedule. The covers meet all performance guarantees.

Air Covers is based in Burlton, Shropshire and product information can be found at www.coptercovers.com Call +44 1939 270 690 Cell +44 7710 400 489 e-mail: john@coptercovers.com

The Shephard Police Aviation Conference will be on us in November and one of the exhibitors will be Aero Simulators based in Prescott Arizona and Belsele, Belgium. Aero Simulators are offering a new range of simulators to the market and their GIST – the gimbal imaging systems trainer was proving a great attraction to a range of police and SAR operators visiting the Duxford show. GIST is a complete training system for operators on a wide range



THE NEXT GENERATION OF SECURITY ...

- Airborne Video Downlinks
- Central Command
- Disaster Recovery
- GPS Tracking
- Ground Surveillance
- Port & Border Patrol
- SATCOM

MICROWAVE RADIO COMMUNICATIONS

Visit our new web site at ...
www.mrcsecurity.com

Higher Definition.
Leading-edge 1080p HD

MX-15 True HD

1080p

720p

Standard NTSC

communications WESCAM

www.wescam.com
1.800.668.4355

Comparison of MX-15 True HD Output Formats

of sensors including the leading offerings from Wescam , FSI and Denel. It can offer a low cost solution to the training of new tactical flight staff and continuation and advanced training tasks.

The compact system is based on familiar systems including Microsoft Windows application and adds to the familiarity in using a hand controller based upon those used by the original equipment manufacturer – albeit fitted with Aero Simulators wiring.

Aero Simulators has a track record in the simulator business. UK police aviation contractor, Steverton based Police Aviation Services bought into an Aerosimulators FNPT II system for the use of its own pilots and found themselves booked solid on their simulator. www.aerosimulators.com

A range of sensor and searchlight manufacturers continue to arrive at Helitech and other shows seeking to provide an viable alternative to the major providers – FSI and Wescam - for sensors and Spectrolab for searchlights.

With the recent launch of their HD product both Wescam www.wescam.com and FSI www.flir.com are offering high definition to the market and it can be expected that all future orders for new sensor turrets in what is an expensive sector will be of HD quality. HD may be here but there are plenty of alternatives from the manufacturers, Wescam was promoting not only the MX-15 but the MX-15i, 15HDi and 15D – each with a differences specification. The larger turret size is now pretty much firmly in place in Europe – where such as the US market will happily fly a 12 inch gimbal.

No matter what its source HD technology is confidential in both the commercial and military senses, it greatly enhances image quality across the board and as a result makes the task of the trained observer that much easier. This quality comes at a price and that tends to suggest greater profit margins for manufacturers.

Attracted to the good profits to be made the high ‘turnover’ of pretenders to the throne in this sector continues to be reflected in the stands at shows across the globe, Helitech has seen many of them over the years.

It seems that the Israeli manufacturers of sensors have finally decided that the somewhat demanding aftercare expectations of the UK market is not for them and they were again absent, but there were others to step in their shoes.

UPLIFTING EXPERIENCE®
À LA HAUTEUR DE LA LÉGENDE

Arrius 262: highest reliability and lowest Direct Maintenance Cost on the EC 135

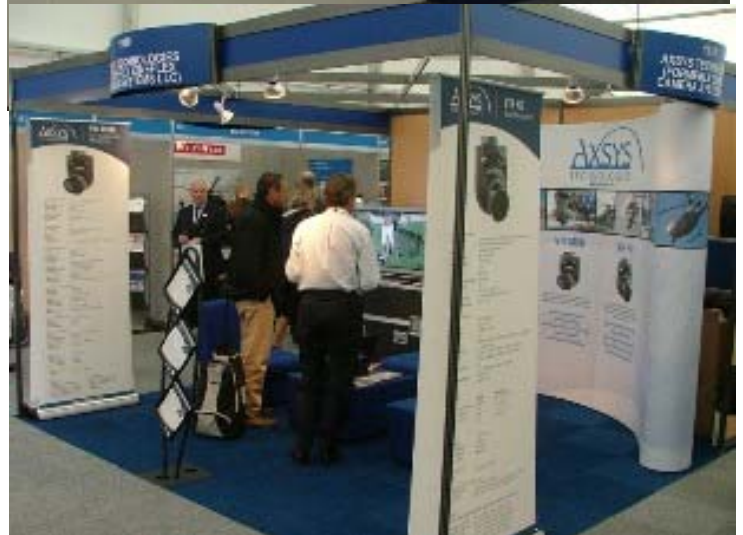
Turbomeca
SAFRAN Group

Carl Zeiss Optronics (Pty) Ltd is a new name to the market but in fact it is a re-branding of the once familiar Denel with whom FSI developed the highly popular LEO product line. The LEO4 was the market leader a decade ago and, even with recent developments, the later LEO II remains a high quality sensor package. These days FSI has largely moved off on its own but Zeiss is offering a continuation of the LEO branding and is taking it to new heights. Readers may recall that two new African operators [Botswana and Namibia] signed up for new LEO's last month.

Zeiss were exhibiting a couple of sensors at the show – the centerpiece being the LEO-II-A5 Extended Performance (EP). As reported last issue [October 2007] the latest in the line includes the latest generation 640 x 480 high resolution 8-9 μm Focal Plane Array (FPA) QWIP thermal imager with three Fields of View, a daylight TV and wide spectrum Spotter TV Camera, video autotracker, slaving kit, and laser pointer.

Even without a recent rebranding the Cineflex was a new product to the UK at the time it rolled into the 2006 police aviation conference but it came with an already high level of acceptance in its home US market in the movie and high end surveillance sector.

Now Cineflex is dead, long live Axsys! Doesn't quite slip off the tongue but I guess it might in time. The product is High Definition and the high end of the market is going that way, but whichever way you look at it Axsys has to prove not only the ability to produce the images but that it can support the product 'in theatre' – something that many new sensor operators have failed to appreciate. Axsys Technologies IR Systems has set up a UK base in Bordon, Hampshire, call +44 1428 717722 but their website offers wider information at www.axsys.com



Coming up to the tenth year of manufacture Swedish sensor providers PolyTech have been regular attendees at shows across the World and they have made rewarding inroads into the lower end of the market – powerline and the like – but have yet to move into the emergency services sector. www.polytech.se

The show looks likely to be the final appearance of the PolyTech sensor as an separate entity. A while back Swedish company PolyTech entered and then left the FLIR Systems, Inc fold and at showtime was part of France based Cedip Infra-red Systems, a manufacturer of cooled mid- and long-wave infrared cameras for the science and security markets. It was under the Cedip banner that PolyTech appeared at the Milipol Exhibition. FLIR Systems has announced that it had entered into an agreement to acquire a controlling interest in Cedip and it will again pick up PolyTech’s high performance, stabilised gimbals as part of the deal. FLIR say that Polytech's products will expand FLIR's portfolio of stabilised multi sensor systems and position it to take advantage of incremental growth opportunities in FLIR's Government Systems and Commercial Vision Systems businesses. Upon closing of the transaction, Cedip's infrared camera operations will be integrated into FLIR's Thermography Division. The Polytech subsidiary will be integrated into FLIR's Government Systems Division.

Many years ago FSI dabbled with the manufacture of a gyro-gimbal containing an uncooled FLIR sensor primarily aimed at providing the lower end of the US law enforcement market with low-cost equipment. They were not happy with the resultant product so they withdrew it after a short production run. All of which makes for the irony attached to the sensor being offered by Swesystem AB from Arla in Sweden www.swesystem.se. They have a gimbal system – mainly aimed at powerline inspection – that employs a FLIR SC640 hand-held TI camera to provide the low cost external camera. The hand-held is a science-grade offering an ideal tool ideal for the most advanced infrared temperature measurement applications.

Weighing only 3.8lbs, the camera is dscribed by the manufacturer as being a lightweight laboratory diagnostic tool not something that FLIR envisaged flying powerlines.

Such equipment is never likely to make inroads into the sophisticated UK emergency services market but with a range of UAV’s in development it may well find a niche market in the less sophisticated sector.

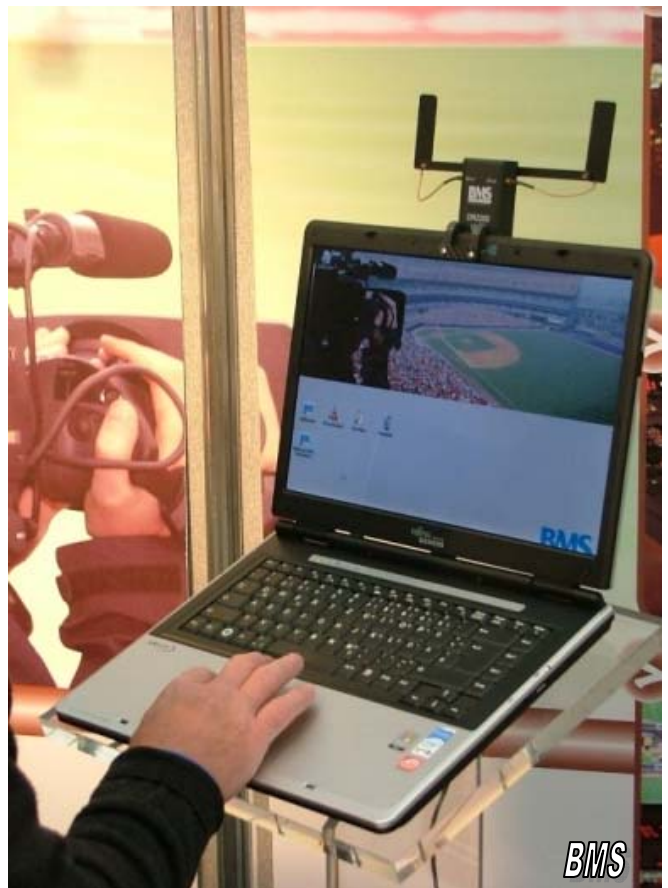


In days of yore aircraft were simply about taking people to a height to observe and report then they took cameras to carry back the information then they took movies and brought them back to be analysed. Now its all about instant access to the product of the cameras and a great industry every bit as rich as the one producing the aircraft has sprung up to get those images to those who need them – and to encrypt the result so the wrong people do not get a look in!

Considering the breadth of the market [police, fire, ambulance, TV Coast guard etc etc] there were relatively few downlink providers at the show. This was undoubtedly due to the ever growing [and expensive] number of shows now available. ECS and BMS/Navtech were at Helitech but if you had gone to DSEi you would have found that ECS and MRC were present...equally BMS were at Milipol but others were not. The other contenders [Digiwave, Domo etc] were probable outside in the static – al but unnoticed. The chances of getting them all side-by-side to compare are few but this again is about many vying for a relatively few contracts. Everyone wants to be top dog and will do their best to achieve that. In short they are all nominally providing the same product. The digital or [now less so] analogue transmission and reception of pictures. The final decision is in the detail.

Enterprise Control Systems [ECS] were celebrating twenty years in the industry and the award of a Queens Award for Industry and innovation at Helitech. Their stand at the military hardware orientated DSEi show a couple of weeks earlier had featured many black boxes that may of may not have contained wires and transistors. For Helitech each of these was set aside and replaced by a spectacular motor car.

Colin Bullock the Managing Director of ECS has a thing about motor cars, aviation and electronics. For some 11 or the years that ECS has been producing the black boxes for aviation he has had a personal passion for something in silver. Over the years in his spare time he has been marrying the chassis of a 1928 Lea-Francis to a 1928 four cylinder Cirrus aero engine to finally create a machine unique to motoring - The Lea Cirrus. As expected the unique car attracted more than its fair share of attention.




HELI-EXPO
Houston, Texas February 24-26



The Helitech formula this year included a number of presentations in the hangar of the museum. Among the items in the programme was a presentation by Inspector Ian Humphreys of the Merseyside Police Crime Reduction Unit entitled Micro VTOL UAV's in UK Law Enforcement Operations. This presentation included a demonstration of the MW version of the four rotor Microdrone inside the lecture theatre.

Merseyside are nearing the end of the final evaluation period and are keen to ensure their deployment protocols meet with CAA approval – providing the bench-mark for best practice for other UK forces. Local news reports of the craft being employed on pre-planned 'visual support' operations continue to trickle in. Meanwhile the West Midlands Fire Service have already made many decisions based on earlier trials and are to taking a machine into service.

Transas Eurasia Ltd based in Failsworth Manchester are representing the Russian TSL-1600 SAR searchlight in the UK. The gimbal based mounting for the 30 million candlepower lamp is like all recently developed searchlights restricted to 350° rotation. With the highly publicised problems faced by the Spectrolab Nitesun II now 'solved' it remains to be seen whether there is enough real pressure in the market for any of these new searchlight systems – including the Trakka.





Copter Covers

Shows are about a bit of fun at times and I managed to trip over a few in the three days. One was the out of place salesman who was selling a novel sticky pad 'thingy' that promised to secure your cellphone, I-Pod or packet of cigarettes to the top of your car [or Aero-plane?] instrument panel at minimal cost. Something really out of place in a technical show of course. But, by means of his props [a perfectly useless sloping top table and replica dash top] he proved that for £10 you could have two of these lumps of jelly in your possession and of course they would enhance your ability to use your cellphone, light up a cigarette or programme your IPod illegally whilst driving! www.nano-pad.com



MILIPOL 2007 PARIS

9-12 October 2007

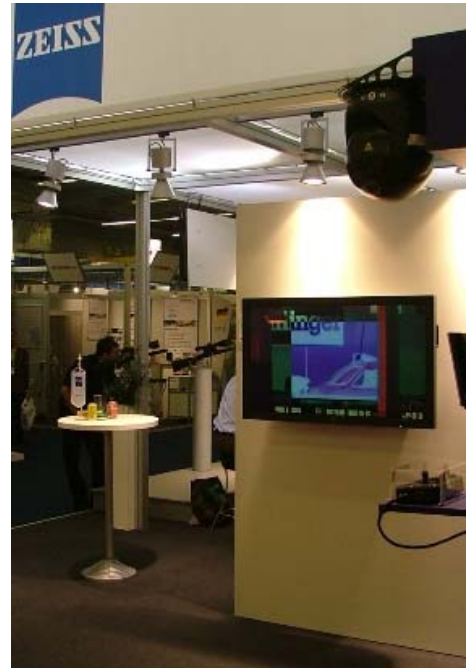
Milipol is a bi-annual arms show very much in the mould of the London UK based DSEi although slightly less military in nature. No big ships and tanks but arms and light armour all over – most definitely orientated towards the para-military, special weapons and tactics and somewhat alien from the workings of a nominally ‘unarmed’ police force like those in the UK.

Aviation content is minimal and primarily led by such as the airborne sensor manufacturers. If as an airborne emergency services professional you were presented with the option of only one show out of DSEi, Helitech and Milipol it would have to be Helitech. That does not take away the fact that both DSEi and Milipol have messages to put out. As you will see in the following report in some cases a blurred picture can be made very much clearer in being there for just a very short day.

Unlike most other shows ‘endured’ by the industry exhibitors Milipol is a very long day. From 9am to 6pm for four continuous days is rare in the industry and invariably leaves the exhibitors exhausted after adding travel to and from hotels and the necessary eating out time. But regardless of its downside Milipol is the place to be seen and the rewards usually tangible. The area Milipol takes up is very large. It may be smaller than DSEi with its docked ships and water demonstration areas but even in its new home on two floors of the Paris Expo this is a vast display of guns, body armour and technology that attracts police from across the World.

The familiar aviation related exhibitors at the event included BMS, FLIR System, Cedip/Polytech, Wescam and Zeiss are all in the same category – collecting and transmitting the visual image. In that it is a very narrow market sector. Perhaps fortunately the new aviation sector – UAV’s and drones – was at the show in large numbers. The day of the UAV seems to be pressing. It seemed as if everyone has their own idea of the ‘perfect’ unmanned craft for assisting the military and civil industry in looking over walls of all heights. Some were tiny craft, some large, some were aeroplanes and others helicopters, their numbers were such that only a few bear mention and even so as this was not in any way a UAV convention the numbers present was but a tiny representation of the real number industry is offering the market today.

On the news front it is fair to report that the French Police National have gone so far as to purchase an KYU Microdrones/ Sirehna Elytre UAV craft for trials. For a formation with very little air support this is a promising advance. Their foray into UAV’s will face the same restrictions as all other potential police users, but the cost of these things is so low that purchase is a credible option just for trials. Project ELSA uses a light twin-propeller hand-launched electric powered craft that offers





a top speed of some 70kmph and an endurance of around 45 minutes. The on-task operating speed is much lower and quoted in single figures. The craft is a simple foam styrene wing and body with twin boom tail-plane and a central payload carrying fuselage. www.sirehna.com

For the record most air support in France is currently provided by the [military] Gendarmerie and Securite Civile but the Police Nationale has access to an AS350B and Cessna light aircraft that have recently been heavily tasked with providing downlinked video surveillance for the Rugby World Cup. Most of the flying has been undertaken using Marseille based contractor Air Attack Technologies.

COOLSPPOOL

The latest 28.5 volt GPU range
Faster, cooler starts. Perfect for shaft or free turbines. Essential for FADEC aircraft.

NEW Mini 17 A/Hr portable GPU.
Built-in charger, digital voltmeter, protective padded jacket.

Massive performance, true portability, amazingly low weight.

Models from Mini 17 A/Hr to 260 A/Hr Ramp Cart

CALL NOW!

+44 (0)1934 643000

email: info@powervamp.com



Powervamp™

Powervamp Ltd, Weston-Super-Mare, England

www.powervamp.com

New helicopter project in the pipeline?

You need Helimetrics Ltd to help you manage the maze. From operational requirements to programme management, aircraft acceptance, and warranty supervision

Helimetrics Ltd clients already include government agencies, the police, multi national technology companies and private owner-operators

Helimetrics Limited

Telephone: 01608 642231 E-mail: josmond@helimetrics.com

Website: www.helimetrics.com

For some time now PAN has been reporting on the 'unique' four rotor VTOL craft of German origin that has been seen at various shows and associated with the German Army [HEER], Staffordshire Police and West Midlands Fire Brigade. Well I was wrong!

It is not as unique as I had thought. It seems that the once unique craft has been cloned and there are now two such apparently identical craft in Germany. The first of these was AirRobot www.airrobot.com the type now in service with the HEER and they say that the second, marketed at Milipol by CCTV group SIM as the SkyEye www.sim-electronic.com was the result of a former employee leaving during the development stage and redesigning the craft. The SkyEye is now operating with the emergency services in the UK marketed in that country by MW www.mwpower.co.uk. Both craft are incredibly cheap eyes in the sky with figures of just £20,000 [\$40,000 or €30,000].being bandied about for the basic craft. Even if the inevitable extras are added these craft represent a potential bargain.

It was good to see the two similar craft operating in the hall at the same venue. Although very similar in capability the SIM craft looks the more developed craft thanks to its fairings. Both are in the same weight class and offer similar payloads and duration on their electric motors. Both were flown in the hall and along the aisles among and above the visitors with apparent impunity. As they passed overhead the downwash was a pleasant blast of cool-



ness in the hot hall. It might be assumed that both operators were conscious of the Health & Safety issues of doing such a thing in among a crowd of professionals – not all of whom were actually aware of the craft silently whirring above their heads – and it does put forward an unspoken belief that these craft are seen to be 'safe' in crowded places when properly under control and close to the operator. Where the SIM craft has the four rotors uncowed the AirRobot has a simple hoop round the outside that allows the craft to be simply held onto by an operative when in the hover.

The protective hoop was one aspect that the SIM craft did not bring to the party though. One of the stated uses of both craft is in the field of Explosives Ordnance Disposal [EOD] support – a craft intended to be a cheap disposable reconnaissance tool to check out suspect locations for bombs. Traditionally this task is now done by little robot tanks some armed with shotguns to blow away windows and locks and place disposal charges. This new class of light air vehicle can undertake the recce task far quicker and cheaper than the tank like craft and can of course cross obstructions that might defeat the ground vehicle. AirRobot are circulating a video of their craft searching a narrow basement area and it is clear that that hoop is correcting slight flight errors and protecting the rotor tips as the craft descends into the gloom guided by a low light camera. In such circumstances an unmodified SkyEye would crash out.

In both instances the aircraft would be unable to fulfil the full task of the ground vehicle in that discharging guns and demolition charge insertion would be beyond the flight envelope. It is also debatable whether the operational range of these craft would provide sufficient safety to the operator in the case of a real explosion. If the task does not stray into underground EOD recce there is little to choose between them. AirRobot say they are currently developing a three-rotor design which is expected to provide enhanced flight characteristics but there is currently no word on whether this will also offer the protective hoop.



Before leaving off from vertical take-off air vehicles there is another far cheaper option to help decide whether there are possibilities to be had from the technology. I have been directed to a radio-control toys website that offers all the potential of these Milipol display craft at www.rctoys.com/ and they are asking for just \$2,500 for the basic Graganflyer machine.

There were a number of hand-launch light UAV's at the show, examples from France and even India – this is certainly a growth area in aviation and it might be hoped that the massive level of research into miniaturisation that goes hand in hand with their development will feed down to 'real' air support in time. Where all of these UAV's lose out is picture quality and resolving that deficiency can surely serve to push technology even further ahead in larger craft. In an effort to overcome this less than excellent picture quality manufacturers are offering larger more complicated craft that only tend to widen the gap between what is publicly acceptable and what is not. Most of the hand-launched airplane type craft might present a hazard to people below – after all even 2kg of mass hitting people at say 10kmph will sting – that perhaps the quad-copter craft might not present when in the hover. But take the carrier up a few levels in weight and they become a definite foreseeable hazard.

Representative of the next level up is the IT 180-5 helicopter drone from French company Infotron www.infotron.fr This is clearly far more capable than the quad rotor craft mentioned earlier thanks to its large highly aerodynamic contra-rotating blades, smart cowled body and a weight up to 15kg. It looks good and efficient but not for undertaking live demonstrations in the Milipol Hall. If you were to drop that or its kin into a crowd it would destroy UAV use for the foreseeable future if not for ever.





bloc
2

Milipol
Access / Accès

COMMISSARIAT DU FUTUR



DESIGN



Milipol though is mainly about guns and armour—the range of which in one place borders on the breathtaking.

At times it is difficult to see why the individual exhibitors were there—the large number seemingly unvisited it baffling. The duplication of what appear similar products across the arms industry just compounds that impression. Raising company profile both to the media and customers requires the employment of specialist PR companies that serve only to ramp up the already high costs of attending as an exhibitor.

Typical of the many companies is Netherlands based DSV Dyneema. The product they were promoting on their large glitzy stand space is a fibre—eventually a cloth that is significant in providing a light armour for human body armour and for a wide range of vehicles operating over land, on the sea and in the air. Most customers might never know that they are being served by the company but they [and their ilk] cannot be absent from an event like Milipol. Events such as these are about see and be seen.

