

Police Aviation News



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Special Edition HAI Heli-Expo 2010

IPAR



HELI-EXPO 2010

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DATELINE HOUSTON....

In time of recession you can make allowances for unusual circumstances and 'unusual circumstances' ruled the whole event. I expected to see extra wide aisles and large gaps where recession had taken its toll and was not disappointed, I expected the general message to be negative and downbeat but was surprised at the positive words that flowed from many a CEOs lips. Unfortunately it was pretty clear that the difference between positive and negative appeared to pretty much flowing on national lines. Not for the first time was it the Europeans being positive and most of the Americans being fairly negative. The words were also influenced by the size of the order books so the most upbeat and positive flow came from those with the largest order books – Eurocopter, AgustaWestland and Sikorsky. You did not need the sales numbers the very tone of the messages flowing from the various CEOs lips naturally betrayed the situation long before the Powerpoint slide on 'sales' appeared.

With the exception of Sikorsky it is clear that the US manufacturers continue to fail to get their airframe products and other services right as far as the customer is concerned. In at least one instance this is clearly a disaster that refuses to go away, in another they still have that thin and rather tired accolade of being voted the *best supporting act*. Hopefully this year will see both of those particular specimens exit that regime.

The positive aspect of this is that the winners in this annual posturing of the helicopter industry [the Europeans and Sikorsky] tell us that it will pass and that meanwhile they are going play with their toys until the bad times are gone again.

So as others wring their hands the richer trio are to bide their time and develop new innovative and green technologies for the future. They have the money from the good times and are not going to waste too much of it, production is down but not out.

Unfortunately all this is not necessarily going to have a positive effect on their poorer neighbours in the industry in the future, they may try a little philanthropy but it seems unlikely that those in the deep hole will want to be paying the big boys a licence fee for whatever is developed as a result. Most manufacturers have flown a Fenestron on their craft but the proven technology has remained with Eurocopter. The same might apply to many other 'signature' developments in the future be that the Eurocopter *Bluecopter* or any other design.

Bryn Elliott

As is usual the great event that is Heli-Expo preceded with a mix of company presentations and mini-conferences and HAI instructional classes and meetings.

A regular port of call for early arrivals in Houston was the **Goodrich** Corporation's Sensors and Integrated Systems ninth annual Rescue Hoist Users Conference and training session held, as last time [in 2008], at the Hyatt Regency Hotel just three blocks down from the Convention Center.

The Goodrich event is a much under-rated conference in its own right and attracts some really cracking presentations interspersed with operational and technical forums for the exchange of information, concerns and lessons learned. So much so that there are those in the delegate list who are seen as regular faces that never miss the annual get together.

As ever the last day [the eve of Heli-Expo proper] is set aside for the hands-on hoist maintenance training, for which a full-scale rescue hoist was available for demonstrating troubleshooting, cleaning, inspections and other common maintenance tasks.

Pablo Ocasio, rotorcraft business development director, Goodrich Sensors and Integrated Systems, said, "This conference allowed operators from the Americas, Asia and Europe to share experiences that will improve usability and maintainability of Goodrich rescue systems. We realize that the best ideas come from the people who use our products, and we always look forward to sharing best practices to enhance safe, reliable and affordable operations." www.goodrich.com



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The event is additionally a venue at which other companies might present their wares in an appropriate setting and to a suitable audience – sometimes without having to exhibit at Heli-Expo proper. One such was a presentation by **Shield Technologies** Corporation of their Envelop Protective Covers. The company has recently gained orders for their aircraft covers from the US DoD in the teeth of very strong competition. A cover may just seem to be a cover but in the end politics reared its ugly head and the competition was decided upon best product with a wholly US manufacturing source. The covers on show were displayed covering the component parts of Goodrich hoists but the contract actually covers a wide range of protective technology for covers for the US Army, Navy and Marines. Shield have two different covers for Goodrich Internal and External rescue hoists.



The other major pre-event meet up was that run by **Honeywell** in the capacious conference and meeting rooms of the Hilton of the Americas hotel adjoining the Convention Center. This affair is somewhat different in that the content is more orientated towards providing customers with product and company information rather than the straight Goodrich intention to promote customer feedback – ‘witness’ if you like - on the product. They both have the same outcome they just get there by a different route. In the same venue are to be found a range of other private company product meetings ranging from Bell Helicopter to AgustaWestland, it’s a busy week that no-one can do anything but take a flavour home.

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The 2010 Heli-Expo opened with the news that the US Government was to open a new effort to build a presidential helicopter fleet. The predictable move was announced by the US Navy, which hopes to avoid the excessive cost overruns that made the VH-71 helicopter replacement programme politically unpalatable and led to its cancellation last year.

The new program is dubbed **VXX**, for Presidential Vertical Lift Platform(s). A detailed listing of requirements for the new aircraft is given in a 27-page Request for Information (RfI) intended to survey industry to support a new Analysis of Alternatives to replace the presidential existing fleet of VH-3D and VH-60N helicopters.

In the event there were to be very few references to the new project throughout the show. Even direct questions directed at AgustaWestland – losers in the US101/VH-71 solution last time out – were effectively brushed aside. It was too fresh a wound and too recently resurrected. Clearly AgustaWestland are going to try again with the same airframe; they can only hope that the USN do not again ask for a helicopter to carry the President and then expect it to carry the whole Senate and a brigade of troops as well. The fact that ten similar machines were sold for VIP work in India a few weeks later is an indicator of what might have been.

Supporters of Sikorsky were unhappy the company lost to a Lockheed Martin-Agusta Westland team that, while building more components in the US than Sikorsky, nevertheless based its aircraft on an Italian-designed helicopter manufactured in England and completed in the US. Costs for the VH-71 rose exponentially when a series of new security requirements were imposed after the terrorist attacks of Sept. 11, 2001 but as the European design is larger and more capable than the Sikorsky option it is difficult to see why someone thinks that the S-92 might be more able to absorb that same growth.

As the new aircraft are intended to begin operating in the 2017 to 2023 time frame it is not going to carry the current President while he is in office and he is going to have to continue in his supposed unsuitable current fleet that is even more challenged by the post 9-11 additions.

The display of aircraft were a bit of a disappointment in that the same airframes – or very similar – had appeared at recent HAI events before. Law enforcement aircraft on display among the fifty or so airframes included helicopters from the Houston, Austin, and State Police Departments, the Delaware State Police, and the Plaquemine Parish (LA) Sheriff's Office. Less repeat appearances were to blight the air ambulance sector but the repeats go some way towards indicating the difficult year the industry has undergone.

For the first time since being involved with the now defunct magazines *Police Aviation* and *JAES* the current *Police Aviation* [News] exhibited on a joint booth with Aeroexpo Europe promoting the forthcoming PAVCon 2010 at Pribram, south of Prague – we were just one of nearly 600 exhibitors displaying products and services.



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Near neighbours at Booth 1444 were Fort Worth, Texas, based Texas Aviation Services (TAS), a leader for more than 39 years in rotor-wing completion and maintenance services to the emergency services sector in the US.

TAS were displaying a new AS350B2 customised by themselves late last year. The customer wanted a multi-role completion able to support patrol, SAR and still act as a comfortable inter-company support vehicle. The avionics and interior were designed in a way to support multiple configurations and flight missions while retaining a clean stylish appearance for corporate transport.

TAS customised the many avionics components to include a glass cockpit and tactical radios. Sister Company, Rotorcraft AeroDesign engineered the layout and configuration while TAS staff completed the modification. In addition the completion featured reworking the crew and passenger seats in matching two-tone leather, floor areas in a reversible carpet and non-slip Loncoin combination, interior panels in Izyt mock-leather, installed additional soundproofing and modified the passenger seats to encompass two fold-down armrests.

Also near at hand was the extensive area occupied by **DART Helicopter Services** (DHS). Regular readers of PAN can barely fail to be aware of DHS – PAN receives and cherry picks a dozen product announcements every month and the extent of the DHS booth reflected the breadth of their product holdings. Their hard copy catalogue is two inches thick and threatens the luggage weight of every one to fly in – fortunately there is a digi-version.

DHS extends deals with new and old suppliers each year and for the 2010 Heli-Expo there was an announcement of links being forged with the Bristow Group.

A new distribution agreement with the Bristow Group Inc. gives DHS access to more than 5,000 cost-effective, mission-enhancing accessories from Bristow. More than 70 of those accessories will be available in the 2010 DHS catalogue, and some, such as Iridium Satellite Phones, are available for the first time through DHS.

The late Alan Bristow set up a very innovative company and from the early days of Air Whaling Ltd was developing new ways of working that have been embraced by the industry as a whole. The company that still remarkably bears his name has continued to follow the innovative path.

The addition of the Bristow products expands the DHS product line and enables the support of more helicopter models than ever before. New products available in 2010 include accessories for Eurocopter AS332, EC225; Sikorsky S-61, S-76, S-92; and Bell 212/412 helicopters.

Some of the new products include safety enhancements for the S-76 including an automatic float deployment system, emergency exit lighting and a rear bench seat four-point harness. The DHS range includes maintenance-enhancing products (steps, handles, access panels and protective coverings) for Bell 212/412, Eurocopter 225/332, and Sikorsky S-76/S-92 helicopters.



Tyler external seating is now marketed by Dart
©Police Aviation Research



Bell Helicopter kicked off the Heli-Expo press conferences on the Saturday afternoon as the crowds rolled into town. It was not an all too upbeat event based on a poor sales year in the commercial helicopter sphere, the fact that they were quoting rebuilds and even sales of the Model 210 underlined the current gloom. There were some bright spots in military production but overall Heli-Expo is about the civil side not imported military gloss.

The company still places its commercial future firmly in the Model 429 but it had to take two body blows that entered the public domain in show week.

The most damaging revelation was news that launch customer Air Methods had decided to turn its back on the 429 citing a shift in their buying policy from twins to singles but also letting slip dissatisfaction with the type being overweight. The decision puts a serious dent in sales. Air Methods have one 429 delivered but was expected to convert 25 Air Methods and CJ Systems options and thus were to represent the major operator of the type.

A second blow – and it may be a while before the effect it will have can be assessed – relates to the clam shell doors at the rear of the 429 cabin.

A Special Airworthiness Information Bulletin (SAIB) advises that some models may have clam shell doors installed as access to the baggage area. These doors are approved for external baggage access ONLY and are NOT approved for occupant egress or emergency exits.

The Bell 429 was approved and type certificated by the Transport Canada Civil Aviation Authority (TCCA) on June 20, 2009 followed by FAA type certificate issued on June 30, 2009. The type design includes clam shell doors but only as access to the baggage area. Here have been STC applications for modification of the 429 to an EMS configuration that incorporates the baggage area and usage of the clam shell doors for loading and unloading occupants.

Effectively there will be a need to extend the detail of the existing certification before any rear loading EMS variant can be approved. An STC may be a relatively easy option for the North American market but with such as Air Methods turning their back on twin-power

someone is going to have to finance full certification before rear loading can connect with the wider world market. An option is to only offer side loading of the litter – favoured by many anyway – but it will reduce the flexibility of the product on offer.

There was better news on the floor of the show where in the shadow of their own massive booth Bell is being seen to be working with a Canadian company, **Eagle Copters** of Alberta, in bringing the defunct Bell 417 back to life.

The original Bell 417 was a distinct type that grew out of the military ARH project that was cancelled dragging the 417 down with it. The Eagle project is a 407 fitted with a new powerplant. The original 813-shp Rolls-Royce 250-C47B is replaced with the 1,021-shp Honeywell HTS900, the type destined for the ARH and 417. It was specifically developed for the Bell projects and has already been certified but now it remains an engine without an aircraft. Fitted with the HTS900 the hot and high capability of the basic 407 is transformed.

There appears to be a will in both Bell and Honeywell to assist the developers of this project and they will probably pave the way for Eagle to succeed in recreating a 417 like machine based on their lower overheads and as yet useless earlier testing and certification. If it happens it will be the summer of 2011 before we will know.



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Meanwhile existing operators of Bell Helicopter’s 407 can use a new supplemental type certificate to increase the hot-and-high performance of the single-engine helicopter.

Bell has gained STC approval which allows an increase of the 407’s useful load by more than 400 pounds. Alternately, it may be used to increase the 407’s in-ground-effect hover by about 3,000 feet. Those gains come with no loss of operational safety margin.

The STC will be available through Bell affiliate Aeronautical Accessories, Inc., and draws on excess power available from the 407’s **Rolls-Royce** 250-C47B engine to support revisions of the 407’s performance charts for in-ground-effect and out-of-ground-effect hover. Specifically, it uses available power for up to 10% above minimum-specification engines for out-

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The performance boost requires no hardware or software changes to the aircraft or its engine. It also results in no change to time between overhaul or warranty costs because no engine limits are changed.

The **Sikorsky** company was the only all American OEM to present an upbeat face to the media and the viewing public. Much of this was based on military sales but there was also a solid base of positive commercial helicopter news to brighten their outlook. Despite some negative blips the S-92 is good news – especially if the expected Soteria bulk buy for SAR-H in the UK goes ahead – and the new S-76D is proving a popular upgrade.

During the show Sikorsky honoured the Houston Police Department (HPD) for its customer loyalty and outstanding service to the community – a pat on the back revolving around the lowly model 300.

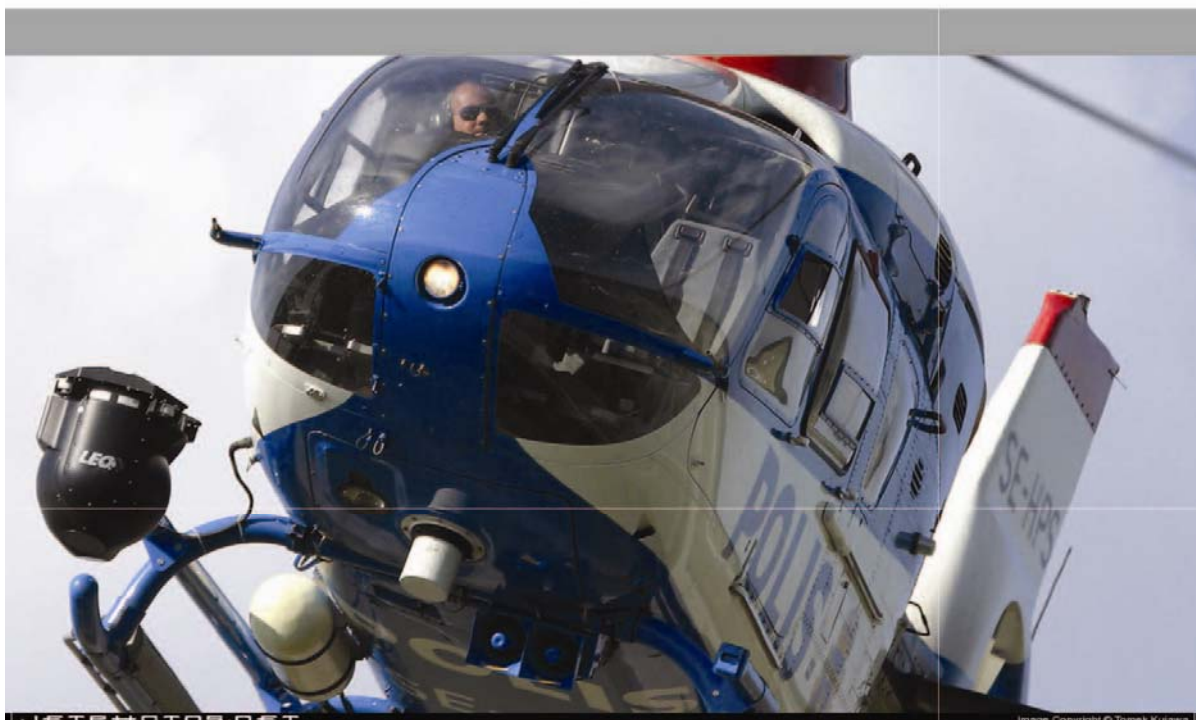
The Houston Police Department's Air Support Division plays a significant role in ensuring the safety of city residents. In 2009 the unit flew a total of 5,132 hours, responded to 12,405 calls, and made 776 arrests.

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Now in its 3rd year, these awards aim to improve competence and excellence in the operational use and application of Airborne Observation Systems.

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The Air Support Division’s fleet includes three Sikorsky S-300C model helicopters, which are used primarily for flight training.

“The Houston Police Department has been a dedicated customer of 300-series helicopters for many years,” said David Oglesbee, director, Sikorsky Global Helicopters, Light Helicopter Division. “The important work they do to protect their community helps reinforce our commitment to build and support reliable, safe aircraft.”

The Air Support Division of the HPD was established in 1970 with an initial fleet of three Hughes 269B aircraft. In nearly 40 years of operation, more than 125 police officers have received commercial rotorcraft ratings in the unit’s 300-series helicopters. These pilots have logged more than 87,000 hours of total time in airborne law enforcement operations aboard Sikorsky light-piston helicopters without a fatality or serious accident.

Developed from the original Hughes 269 through the Schweizer brand the S-300C helicopter operates throughout the world in many demanding roles including military patrol, power line/pipeline patrol, commercial and military flight training, ranching, external load operations, animal surveys, aerial photography and personal transportation. The cockpit size, load capacity, performance characteristics, robust design and low direct operating costs make the S-300C a leader in its class.

Before the shock announcement that Air Methods is to drop further orders of the Bell 429 **Cobham Digital** Audio Control System (DACS) came to the show promoting an installation on the one aircraft delivered.

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The DACS has been installed and will be certified on the first commercial delivery of a Bell 429 air medical helicopter. The Products Division of Air Methods, the world's leading air ambulance operator, performed the DACS installation at its headquarters in Colorado. The Bell 429, owned and operated by Air Methods, is slated to be delivered to the company's Mercy One hospital-based program in Des Moines, Iowa in March 2010.

Because Air Methods has earned FAA Organisation Designation Authorisation (ODA) status, the company was able to secure the Supplemental Type Certification (STC) for the DACS installation. Future DACS installations in the Bell 429 and other airframes should result in shorter certification flow times because of Air Methods' ODA status.

The sole Air Methods' Bell 429 was displayed on the Bell Helicopter booth.

Inlet Barrier Filters (IBF) are a growing after sales sector and a number of companies offer them as an enhancement to the breathing of airframes both old and new. A good IBF captures more than fine grit and damaging particles and can be expected to filter out damaging vapours.

Donaldson's Aerospace & Defense Group, a division of the Donaldson Company, Inc. and formerly trading as AFS cite improved overhaul rates as a prime reason to switch airframes to the IBF. They point to a customer who was previously experiencing 1,400 flight hours from an engine before it was needing overhaul due to degradation caused by the environment they were flying in being able to report the same Huey airframe reaching 2,100 hours into the normal 2,400 hour engine overhaul cycle.

Donaldson/AFS Bell 205/UH-1H IBFs are in operation worldwide in aerial spraying, fire fighting, seismic/utility and military applications. Operators can now realise reduced operating costs along with enhanced performance and expanded operational capabilities using the IBFs.

Donaldson offers certified IBF solutions for the AgustaWestland AW119 Koala, AW119Ke and AW139, Bell 205A1, 206B, 407, 206L-3/4, 206L-1 (C30), 429 and 430; Eurocopter EC130, AS350 B/BA/B1/B2/B3, AS350's with Soloy or Heli-Lynx Honeywell engine conversions and MD Helicopters MD 369H Series, MD 500D/E/F and MD 900/902.

IBF for the AgustaWestland AW109 Power and Grand, Eurocopter EC135 and the Bell 206L are currently in development.

In an unusual move **Eurocopter** are going head to head with Donaldson on the IBF front. They brought to the show a new build Eurocopter EC135P2 in German ADAC HEMS specification fitted with their own design of IBF on the basis that they 'do not like the options that industry is offering' them in that product line.

Neither the Donaldson or the Eurocopter IBF is yet certified so it remains to be seen where this little bit of OEM and after parts competition leads.



IBF by Donaldson ©PAR



IBF by Eurocopter ©PAR

AgustaWestland preceded the Eurocopter press conference and the show opening by a day and the move gave them an advantage not previously enjoyed via the first day show daily. It may have a very limited audience but – as will be evident later in this report – the content matters to show exhibitors. Day 1 was also the busiest day – further enhancing the kudos of the issue produced then.



AgustaWestland reported a year of commercial, industrial success as well as expansion for the international partnerships. Despite the crisis, 2009 was reported has been a great year in terms of results. As before Finmeccanica did not allow the issue of the 2009 at the show but they have appeared since.

The company has continued a process of globalisation that saw the acquisition of PZL Swidnik, now AgustaWestland Swidnik, and this will widen the global footprint by adding the current PZL products to the AW product line. This year this wider product line was understated.

Another addition is the agreement with Tata Sons establishing a joint venture agreement facilitating penetration of a growing Indian market. Targeted are the police, public utility, and EMS markets – areas yet to be developed. A new factory in Hyderabad to assemble the AW119 will not it seems be in competition with the US production line for Koalas and AW promise to satisfy [unspecified] US Government requirements with manufacture in Philadelphia.

In a similar vein the production of the US based production of the AW139 looks like being watered down by a joint venture with Oboromprom introducing the AW139 in the Russian market. An AW139 commercial final assembly line is under construction in Pankhi, and they expect to deliver the first commercial Russian built AW139 in a couple of years.

AW feared it could have been much worse, especially if compared with other sectors in aerospace manufacturing but have been pleased to see the AW139 success continue. It is now by far the reference aircraft in the offshore sector, strengthened by the order for three AW139 from Bristow, to which four more were added during this show.

SAR operations in Sabah and Sarawak will be bolstered by three AW139 helicopters purchased by the Government. The helicopters will arrive at year's end and hopefully operating in 2011.

The A109 continues to be the mainstream airframe and despite its age the type continues to find favour in the police and air ambulance markets – particularly in Asian markets.

At the show AgustaWestland unveiled the Grand New, an evolution of the highly successful



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Grand helicopter. The Grand New features the very latest developments in avionics while retaining the outstanding Grand's characteristics, performance, cabin space and payload only provided by larger and more expensive helicopters.

The Grand New has already received the EASA certification while FAA certification is expected to be achieved in mid 2010. Equipped with EVS (enhanced vision systems) and a Terrain Awareness Warning System (TAWS) for night operations, the Grand New also meets the latest NTSB/FAA recommendations for EMS operations to consider the use of an FAA-approved night vision goggle or enhanced vision system into flight programmes, when conditions and missions dictate.

The Grand New will be the first type certified light twin with a new EFIS featuring Synthetic Vision. This approach enables the type to operate on helicopter-dedicated routes and it is SBAS (Satellite Based Augmentation System) capable, features a state-of-the-art avionics package and a new glass cockpit.



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On the surface **Eurocopter** brought no new airframes to the show, but beneath what appeared to be a fairly standard line up there was a thread of innovation that the group hope to promote into the future. Examples of R&D work, all seeking to demonstrate an innovative strength and continued effort to increase the customer value of its helicopters were spread across the booth and carried over into presentations in meeting rooms elsewhere in the Convention Center under the Bluecopter® Technology banner. On the booth were three twin engine types and two singles, the now familiar mock-up of the EC175, this year SAR-configured, an EC145 exhibiting vibration damping main rotor flaps that are nominally part of the Bluecopter® Technology R&D work but were actually operating on the customer air ambulance and the ADAC EC135 P2i with its IBF. The same EC145 was displayed at the AMTC in San Jose last year and was not obviously wearing these flaps. An Air Methods EMS configured EC130 B4 was appropriate when associated with a major order from Air Methods for similar craft. Finally an AS350 B2 completed the line-up. The example was from Canada's Slave Lake Helicopters, providers of services that range from tree planting and forestry duties to firefighting and oil industry support.

A total of 114 EC175 have been pre-ordered by 14 customers to date. Type certifications by EASA (European Aviation Safety Agency), FAA and TCAA are slated for 2011, with first deliveries scheduled for 2012. The full-scale mock-up of the EC175, reconfigured for SAR missions and wearing a supposed spurious Securite Civile scheme.

The type will bring to the market advanced search equipment (360° search radar, Electro





Optical System, high intensity search light) and rescue equipment (double class 1 hoist, bubble windows, additional lights) designed to offer prospective customers a highly efficient SAR mission system concept.

The large cabin and storage area ensure multiple-casualties rescues, installation of a high amount of mission equipment, and facilitate state-of-the art in-flight medical treatment. Two extra-wide, sliding passenger doors allow maximum space for demanding hoist actions.

The EC175 is equipped with a full screen cockpit and a digital four-axis Automatic Flight Control System (AFCS) that outperforms any other automatic pilot system on the market. It is linked to the flight management system (FMS) which provides area navigation and automatic search patterns. The AFCS, which is derived from the EC225, provides unrivalled help to the crew throughout a SAR mission by providing automatic transitions adapted to coastal environment, the most reactive and precise automatic hover mode at sea or on shore, and unique automatic management in case of an engine failure whether the aircraft is in cruise flight or in hover mode.

At the show American Eurocopter announce that Suffolk County Police Department has ordered another AS350 B2 to add to their existing fleet of two AS350 B2s and one EC145. This aircraft replaces another helicopter, the MD902 Explorer, and the SCPD's Aviation Section has now become an all-Eurocopter fleet operator.

They went on to announce that US Customs and Border Protection has entered into the first option year on the Light Enforcement Helicopter (LEH) contract and placed an order for six AS350B3s. This is the second order on the LEH contract that was awarded to American Eurocopter by the Department of Homeland Security in July 2008.

The LEH contract with the Department of Homeland Security is a multi-year contract and may result in orders for a total of 50 AS350B3s and could be worth over US\$150 million. The first helicopter on the contract was delivered in December 19, 2008 and to date, 14 aircraft have been delivered. The LEH aircraft are produced in the company's facilities in Columbus, Mississippi.

AEC added that Travis County STAR Flight has ordered another EC145 for its public safety air rescue programme based in Austin, Texas. This will be the third EC145 in its fleet providing service and support for more than 19 counties in the central Texas area.



It has been another bad year for **MD Helicopters, Inc. (MDHI)**, both in terms of total deliveries made and meeting the aspirations of their customers.

On their booth the company exhibited an MD Explorer and a Houston PD MD500E – the final aircraft of the contract that was itself cut back because MD could not meet the delivery

schedule. In 2006 [the last time we were in Houston] the major sale to the PD was the talk of the town. A year later and it was clear the wheel was coming off and the customer was making threats to cancel that MD could never have avoided purely through a lack of capacity. The last two airframes of that initial ground-breaking order were cancelled and, even worst for the end user, the authorities never reinstated the lost airframes. This left the Houston PD as a big loser across the board.

That Houston PD order represented probably the biggest one customer civil order MD ever had [well since the 10 Explorers ordered by PAS in the 1990's] but it all went wrong when



MD failed to deliver the last three aircraft on time. It is some wonder that they even allowed their aircraft to be displayed – but they did. The industry is too small for major spats to be carried over and Houston PD still have to fly the airframes they have.

Houston Police contract is a typical example of a delivery shortfall but it has been an across the board problem that other OEMs have survived reasonably well but MDHI have not. Its effect on raw nerves became clear at this Heli-Expo.

There are some positives to be drawn and the company was able to announce that the fleet of NOTAR helicopters have clocked more than 1,000,000 flight hours since MDHI's exclusive anti-torque technology was introduced in 1991. MD Helicopters' MD 520N[®], MD 600N[®] and MD Explorer[®] helicopters use and validate this technology. The NOTAR anti-torque system provides MDHI with a unique product to offer customers that stands to offer some of the safest, quietest helicopters available to the market.

But NOTAR, the new technology product, remains a niche offering largely distrusted by the wider market and it is still the conventional product that leads MD sales into market. The company delivered its 600th MD 500E[®] to Eastern Atlantic Helicopters in West Sussex, UK. The MD 500E traces its roots to 1960, and the US Department of Defense request for a Light Observation Helicopter (LOH) to fulfil various roles: personnel transport, escort and attack missions, casualty evacuation and observation.

Beyond the obvious technical problems that brought MD to its current position there has been a clear effect on how the MD CEO has been 'getting on' with both the aeronautical press and the other OEMs. In short it has not been well.

For a couple of years Lynn Tilton has been exhibiting her frustration with bad press and in fairness it has been laughed off in the past, even though one target of her past ire has now left the press corps for a job in PR.

At this years press conference she laid bare the state of MDHI finances and admitted to effectively over-ordering parts to meet predicted sales of some 70 airframes that only materialised into 40 deliveries. Apparently there is some \$11M owed to vendors and that apparently fuelled renewed speculation that the company was spiralling out of control [again]. But the MD CEO is not giving up on the company and will see it through its bad times to where it comes out the other side. There are other companies in her Patriarch portfolio where she has exhibited a steely will to stay with the sick child, so it is not just an MD thing.

Overall though the theme of the talk to the press was about how other OEMs have been attacking her helicopter company in a manner that berates it and depresses customer confidence. Whether that is true is debatable. Bell has been continuously praised for its good customer service in Professional Pilot magazine but it is still struggling on commercial sales numbers pending acceptance of its potentially world beating 429 product. It is MD performance for customers that actually matters and it is they – the customers – that have been voting with their feet not some biased opposition CEO of another OEM let alone hack writers.

This year one reporter on the show daily operated by AIN is reported to have a nose to nose berating for the words he wrote reporting the MD press conference. I was there at the press conference Sunday and the report in the Monday show daily was clear and concise so I really cannot see what Tilton was complaining about. But maybe it was too concise, the following day the Show Daily included a full page write up on what had been sufficient for 5 column inches on day 2. That fits in better with her profile!

So, what was the ground breaking aerospace content of the larger article? Well nothing really. MD's problems, including a suggestion that they were going bust, were placed firmly at the feet of 'another OEM.'

Last years promises of 70 sales failed to see the light of day so the promises for what will come about in the next year must be seen as aspirations for a company currently trading at a level that does not place it in the big league. They have the capability but we have yet to see the fruits of that.

In the near future MD500 customers can expect to have the option of a glass cockpit for the 500, US certification is expected in April. The manufacture of the MD902 fuselage in Turkey will cease as there is an aspiration to undertake airframe build in the USA.

Away from the HAI press conference content it might be considered that if at some time in the near future Boeing were to gain a major Little Bird contract and were then to allow MD to build and supply the MD500 airframes MD might be made. The dark area of that in the wake of the MD track record after the Houston and other contracts is whether Boeing might consider that MD were able to meet their delivery schedule.

United Rotorcraft Solutions (URS), displayed a customised Air Medical Bell 407 one of two they completed for HALO-Flight of Corpus Christie.

The 407 is configured with Chelton's synthetic EFIS, provisions for Chelton Auto Pilot, WSI AV-300 Satellite Weather and Avidyne TAS 610 Traffic Advisory System, the Honeywell KRA405B Radar Altimeter, dual Garmin Comms and a Garmin Transponder, two Technisonic TDFM-136 VHF transceivers for the medical crew, Technisonic A711 and A710 audio, a Motorola 800MzFM, the SkyConnect Tracker with 11 channel SOP Dialer for flight following the URS/Ahlers STC'd Night Vision modifications.

The LifePort medical interior is installed along with some highly customised features such as the Zoll mount and Balloon Pump mount designed and certified by URS. The airframe is fitted with the Paravion air conditioning and bleed air heater/defroster, AAI Super Night Scanner and the AFS Inlet Barrier Filter.

Before Heli-Expo the Russian's announced that they were to be undertaking a major push into the US in the wake of the recent EASA certification of the **Kamov** Ka-32A11BC—a type said to be 'globally agreed' as one of the best fire fighting helicopters.

Coaxial rotors are particularly useful in fire fighting (in highly turbulent atmosphere) and the Russians are promoting the type by stating that experience proves that tail rotor controlled helicopters are inefficient in fire fighting operations.

In Canada the Ka-32A11BC has long been the machine of choice for logging in difficult and mountainous terrain. In a number of conditions this helicopter has no alternative. Its reliability is confirmed by operations in Canada, where these helicopters have logged tens of thousands hours without overhaul. In recent years these helicopters have been employed in several high profile fire fighting operations.

With this in mind the Russians sought to promote their craft not by sending one to Houston but by talking about it in a so called 'Russian Hour' which featured a number of presentations by representatives of Russian companies promoting all the Russian helicopters on offer though primarily highlighting the Kamov and the Mil Mi-8 derivative the Mi-171.

Along the way time was found to 'showcase' each of the Mi-34C1, Ka-226T, Ansat, Mi-38 and even the mighty Mi-26T heavy helicopter. Many of them have been immobile projects for decades but still they were promoted as being 'helicopter of choice' for amateur and professional pilots alike.

The Russian Hour lasted nearly two hours and opened to a packed house. The numbers dwindled significantly – especially after one early speaker was so far from the microphone that no-one could hear him and his thick Russian accent. But, in an *Emperor's New Clothes* moment not-one of his aides seemed able to tell him that he was wasting both his and the audiences time. Perhaps the salt mines are still an option after all. For what it was worth the audible sections of the presentations were 'laundry lists' of facts and 'slick presentation' did not enter the programme.

It would be great if the Russians could sell their helicopters into the US but they need to dump this presentation style super quick.

Meanwhile the Ulan-Ude Aviation Plant, part of the rotorcraft industry holding managed by Russian Helicopters announced the delivery of one passenger and three cargo Mi-171 helicopters to International Handling Company Ltd. of Azerbaijan while at the show. The helicopters are equipped for oil & gas operations.

North American Surveillance Systems Inc., (NASS), a leader in surveillance system integration, announced the opening of its aircraft hangar at the Deland Municipal Airport .

PLUS POINT

For the European visitors one aspect of Houston Downtown [City Centre] life that saw great favour was the cost of parking.

Although this was a particularly low priced example just outside the Convention Center comparable rates for a similar location in most European Cities would be at least 4 Euros/Pounds etc an hour.



The newly acquired hangar is located 40 miles north of Orlando near Interstate 4 and will accommodate the growing needs of NASS customers according to NASS President Richard McCourt.

“This 12,000 square foot facility provides the perfect space for our expansion efforts. It is the ideal location for all our military, police and civil aviation clients,” he said.

NASS introduced its True High Definition LCD Display Monitor at the show. The new 21.5 - inch monitor is night vision compatible and represents a tremendous advancement for the surveillance industry according to NASS. The monitor uses low power, has instant on/off and has a high contrast ratio. Many industry monitors accept an HD input but do not output a true (1920 x 1200 pixels) HD output. The monitor has day LED backlighting, ruggedised enclosure and is also available in 15-inch, 10-inch and a 7-inch model with an optional cockpit glare shield mount.

Now 35 years in the business Becker Avionics, a leading provider of communication, navigation, surveillance and search & rescue equipment for airborne and ground applications were exhibiting a range of products including the DVCS 6100 a digital audio and intercom system designed for both rotary and fixed-wing applications and the MR510 personal locator beacon.

The 6100 system is superior to any analogue system, as it offers crystal-clear voice communication quality, a proven Man-Machine-Interface (MMI), outstanding reliability, as well as scalability and flexibility because the system is fully software configurable.

The DVCS' performance and scalability has led to numerous installations in a diverse mix of rotary and fixed wing platforms, including, but not limited to the following models: AS350, BO105, EC135, EC145, MD900, Bell 412, S-70A, DO228, MA-600, Pilatus PC9, L-410, King Air 350, DHC-5 Buffalo, Dash-8, and the C-130.

The MR 510 PLB has been developed over many years of proven experience gained with the reliable MR 506/ MR 509 PLB. The new Becker model includes reduced weight, size, power consumption, new water activation, V/UHF voice communication, and 12 channel GPS based on the latest technology. The result is the most advanced PLB available to date. Becker has received the COSPAS-SARSAT certification of its new MR510, the only PLB on the market which provides an integrated, extractable 3 band VHF/UHF antenna and an integrated GPS antenna in a single compact housing. www.beckerusa.com or www.becker-avionics.com.



The first production S-92 helicopter was delivered in late 2004. There are now 105 S-92 helicopters in operation in 21 countries around the world. Helicopters in demanding operations can average more than 150 hours per month, and several operators are flying 40,000 hours per year or more on their S-92 helicopter fleets. More than a dozen of the aircraft in the worldwide fleet have flown more than 5,000 flight hours to each, to date, and the highest time S-92 helicopter has amassed 8,100 hours.

Flight Display Systems were exhibiting a new high definition digital video recorder at the show. The FDHDR200, a HD-DVR designed for rugged aviation use features 1080i HD resolution, up to eight hours of record time, and 50% smaller installation profile than legacy VHS recorders. The HD-DVR is available today in two versions, including a remote cockpit configuration specifically designed for helicopter installations.



For more information on the HD-DVR from Flight Display Systems, please contact your location avionics dealer, or visit www.FlightDisplay.com

General Dynamics Advanced Information Systems acquired **Axsys Technologies** in September 2009.

Axsys cameras are known for their superior imaging capabilities and proven performance in the helicopter market but it remains a small niche company and it has yet to make inroads into the wider law enforcement market. It is possible that the new ownership will improve their overall capability. A contract with a European police force awaiting ratification but that has been the case for some weeks now and the more time passes the weaker that story gets.

The company was exhibiting the Axsys V9 Multi-Sensor: A mid-size, lightweight and user-friendly gyro-stabilised imaging system designed to meet airborne law enforcement (ALE) and surveillance missions. It offers a laser pointer and a fully integrated search light slaving

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capability for maximum functionality and reliability within a durable, aircraft-grade aluminum body.

The Axsys V14 MSII; a fully digital, multi-sensor imaging device designed to provide exceptional surveillance and detection capabilities for law enforcement, military and public utilities. Lastly the V14 HD is a flexible, lightweight production broadcast camera designed to provide true scene fidelity and unmatched color clarity. It is available with extreme standoff lenses that deliver unrivaled focal length or wide angle lenses for cinematography applications. It is a gyrostabilised camera system with the ability to interchange between different lens options in the field.

Regular readers may recall the recent article in PAN on the Placer County AS350 delivery with the Axsys camera fit. At the show the company was able to promote another US customer in the delivery of two V14 MSII camera systems to the DeKalb County Police Department in Georgia. Since delivery the company and the PD have successfully completed the ground and flight training for the department's pilots and tactical flight officers. The systems have been installed on two AS350B2 helicopters operated by the department's Aerial Support Unit, headquartered in Tucker, GA.

American Eurocopter handed over the second AS350B2 helicopter to DeKalb County at the 2004 ALEA Conference, it replaced an MD500. The Axsys delivery is an upgrade to the airframe and its predecessor.



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As ever the Heli-Expo included a significant line up of apparently conventional searchlights. Conventional in that each of them employs paint bubbling hot bulb technology and turns its back on the upstart new Trakka technology that PAN has been following along its rocky path for the best part of a decade now.

Revue Thommen of Waldenburg, Switzerland announced at Heli-Expo that they are introducing a new searchlight to the global rotary wing market. On January 28th in St. Peters-



burg, Russia, Revue Thommen signed a broad and comprehensive licensing agreement with TRANSAS, the manufacturer of a technologically advanced helicopter searchlight. TRANSAS is a large Russian manufacturer of aviation and marine products designed for their domestic applications. After investigating the searchlight potential of the US and other markets, and learning that without EASA or FAA airworthiness certification, sale of the product was impossible, they entered into the Licensing Agreement with Thommen.

The licensing agreement is an effective response to market conditions and a natural result of the two Companies' complementary manufacturing and marketing philosophies. The agreement calls for the exclusive worldwide sales and distribution rights (except Russia), a complete transfer of all technical and design data and documentation and design and production authority at the Swiss facility.

Ed: I am pretty sure that this Russian light has been at HAI Heli-Expo and other major Western shows before accompanied by its Russian owners. It would seem that they had not realised the difficulties they faced in penetrating Western markets faced with the 'normal' products of Spectrolab. They may yet be too late to market to gain a significant foothold facing a Spectrolab that has largely got over its product difficulties and the upcoming Trakka cool light that can boast surviving the most rigorous testing and an apparent string of customers including most of the US federal ALE operators. The latter will not endorse the Trakka [or any other product for that matter] but we can expect the camera to be constantly underlining the level of acceptance of the Trakka from here on in.

After receiving a competitive bid award last year, north Louisiana based **Metro Aviation, Inc.** delivered the first new law enforcement equipped Single Pilot IFR (SPIFR) EC135T2+ to the Massachusetts State Police Aviation Section. The comprehensively equipped aircraft was delivered in new "green" condition from the manufacturer to Shreveport, Louisiana where it underwent the extensive completion and systems integration. The aircraft will enter service in May and will be the first of its type in a fleet replacement programme for the state.



Metro finished the aircraft with an array of law enforcement equipment such as a night vision cockpit and cabin area, Wescam MX15 gyro stabilised thermal and HD colour camera, advanced Tactical Flight Officer (TFO) suite in the cabin area, along with microwave capability to transmit live video images from the aircraft to ground units.

"The EC135 we recently finished for the state of Massachusetts is likely the most well equipped aircraft of its kind in the country and we are proud to have been an integral part of such a impressive airborne law enforcement program", commented

Metro's director of sales, Jim Kettles. "We designed and integrated all the avionics systems and airframe components to meet the stringent demands of the state police to provide the vital role of protecting and serving the citizens of Massachusetts and the surrounding area," Kettles went on to say.

Ed: It is worth noting that the current Massachusetts State Police fleet of Eurocopter AS355N TwinStar helicopters was completed in the UK by the then McAlpine Helicopters [now Eurocopter UK] to a standard that reflected UK practice and was expected to grow until the customer saw the class of aircraft being completed for UK police in the same facility. The additional TwinStars never materialised as aspirations to acquire the EC135 promulgated but the existing fleet was upgraded to reflect UK practice by adding larger 15 inch sensors in place of the Inframetrics/Talon class of sensor they had been delivered with.





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Robinson's turbine helicopter, the 5-place R66, that Heli-Expo attendees were able to visit at the Robinson factory last year is now on offer to potential purchasers.

The craft was on display at Heli-Expo in Houston. The base price with standard equipment is US\$770,000 and the required non-refundable deposit is \$75,000. Robinson is now officially accepting orders. Serial numbers will not be assigned and delivery dates will not be confirmed until after FAA certification is complete.

The R66 incorporates many of the design features of its reputable predecessor, the R44, including a two-bladed rotor system, T-bar cyclic and an open interior cabin configuration. The most notable differences are its increased reserve power, increased altitude performance, fifth seat and large baggage compartment. Popular upgrades including HID landing lights, leather seats, and a stereo audio control panel are standard in the R66.

Robinson is currently accepting R66 dealer applications. With almost 400 Robinson dealers and service centers already established, Robinson anticipates having extensive R66 support in place by the end of 2010.



The Sikorsky S-76D™ helicopter [seen next page] is entering the full production phase, signifying the latest major milestone in the programme that is manufacturing the next generation model of the popular S-76® helicopter.

The first S-76D helicopter airframe entered production on the assembly line at Aero Vodochody (Aero) in the Czech Republic in preparation for the customer deliveries planned to begin in 2011. The first S-76D helicopter airframe – serial number 761004 – had its fuselage joined and then entered final assembly at Aero. The fuselage is scheduled to depart Aero in April 2010 for delivery to Sikorsky Global Helicopters facility in Coatesville, Penn., where final assembly and completion of the S-76D helicopters will take place.

Sikorsky will receive S-76D helicopter fuselages at an initial rate of one per month, beginning with the first fuselage due in April 2010. Full S-76D helicopter production rates are expected to be achieved in 2011.

The S-76D helicopter production effort is supported by more than 30 key suppliers. The airframe originating in the Czech Republic, the engines in Canada, avionics in France, and tail pylon in Turkey.

A promotional banner for Counter Terror Expo 2010. On the left, the text 'COUNTER TERROR EXPO 2010' is displayed in large, bold letters, with 'COUNTER' in black and 'TERROR' in red. Below it, 'EXPO 2010' is in white on a black background. Underneath, '14-15 April 2010 | National Hall, Olympia' is written in red. On the right, a circular graphic resembling a globe or a camera lens shows a collage of images related to counter-terrorism, including a police officer, a biohazard symbol, a person in a tactical vest, and a crowd of people. At the bottom, the website 'www.counterterrorexpo.com' is written in a stylized font.



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Heli-Expo GALLERY

Bell continues to rely upon the Vietnam era Huey derivatives for current sales, as does MD with its 500. Even the Sikorsky S-76D is no spring chicken in development terms.



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AgustaWestland announced that **FAASA Group** of Spain has taken delivery of additional four AW119Ke single engine helicopters for fire-fighting missions. The handover brings the number of AW119Kes in service with this operator to twenty units making FAASA Group one of the largest operator of this model in the world. Two of these aircrafts will be operated by Heliduro.

FAASA Group operates throughout Spain, particularly in the Castilla-La Mancha, Andalucia and Castilla y León regions. The operator provided a major contribution to the 2009 fire-fighting season in Spain deploying up to sixteen AW119 helicopters. The aircraft performed impressively and achieved high reliability and effectiveness in the harsh operating environment. Now this latest the fleet expansion with the addition of four more units will ensure even greater operational capabilities.

Over 190 AW119 helicopters have been ordered to date in nearly 30 countries by almost 90 customers.

Next year the HAI Heli-Expo is to be held during early March 2011 at the Orange County Convention Center, International Drive, Orlando, Florida.

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