

Police Aviation News



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Show Special August 2016

PAR



Farnborough Int. A.L.E.A. Savannah



EDITORIAL

Two very different shows on different sides of the Atlantic. One nominally all encompassing – civil, emergency services, military, airliner bizjet etc and very expensive, the other very much a niche event that costs a whole lot less but at the same time offers less footfall. Both are connected by an industry trying to get the best out of perhaps fleeting meetings with those that have the right and budget to buy and the sure knowledge that it may be many months before they know whether the often eye watering expensive effort has been worthwhile.

Bryn Elliott



Sunnier times. The Leonardo AW189 has now had its FIPS certified and after training the type will finally enter service with the Bristow contract for the UK SAR in early 2017.

FRONT COVER: The lullbefore the storm. In the cabin of the mock-up Bell 525 just before the rains visited. See also page 6 for a view on the Tropical deluge that visited the displays and effectively wrote off Day 1.



The very best of weather

'Bobbies on bicycles two-by-two' seems to be in vogue still

11-17 July 2016. Farnborough International Airshow [FIA]. Farnborough, Hampshire. www.farnborough.com

This year may well go down of the most rain affected Farnborough Air Show ever. Having Day 1 of the Trade event shut down early through the disastrous effects of water getting in the electrics in the main display halls is without precedent and was not unique as there was a shorter but equally wet session on Day 3. The weather dampened proceedings but it did not greatly affect the selling and buying of aircraft and engines.

Such details are always open to interpretation creep but if they are to be taken at face value by the close of day three the order total had crept up to US\$85billion, which alone beat the previous year's Paris Airshow, and had passed \$100 billion by the weekend. The official number was said to be \$123.9 billion but at such heights it is difficult to comprehend.

Farnborough International's internal order tracker recorded a total of 856 aircraft valued at US\$93.98, 1407 engines valued at US\$22.7 billion and a variety of other business deals totalling £7.2 billion.

The global aerospace trade event was opened by both Prime Minister, David Cameron, MP and Virgin Atlantic boss Richard Branson who welcomed senior aerospace executives, military officials and international government representatives at the official opening ceremony with a fly past by the F-35 Joint Strike Fighter flanked by the Red Arrows.

Notable deals over the week included Virgin Atlantic concluding its purchase for 12 Airbus A350-1000 and the UK Government confirming the purchase of 50 Apache Helicopters and 9 Boeing P-8 Poseidon aircraft. Topping the order chart was AirAsia who signed up for 100 Airbus airliners.

According to the organisers the Trade Day visitor numbers [from Monday to Thursday] averaged at 20,000 per day.

As ever the number of airborne emergency services elements at any major air show was low but there to be found eventually. Exclusives were more difficult but I found a pair of those too.

TEXTRON

Textron Systems took up an unobtrusive spot in the front part of what everyone took to be the 'Bell Helicopter' facility although it had a wider Textron range including a range of fixed wing aircraft from Beechcraft and Cessna. Getting the story together was somewhat convoluted thanks to that mega-rain storm and the associated power failure but what came out was a potentially highly interesting flight safety product.

It is a military derived piece of mapping system software that is even now being offered to the commercial civil mapping industry as an addition to their systems and it promises new flight safety features hitherto not available.

Venom offers a series of dual-use software modules that allow the user features previously only available in limited circumstances through advanced imagery and video processing. The overall benefit this software brings to flight safety is to identify and display safe landing areas for rotary wing aircraft but it has other useful features with a day to day importance.

By merging data and sensor imagery it depicts what might be seen from an aircraft above cloud or mist, who can see the aircraft at a given time and detects changes in the scene below.

The first two items are derived from the military role but in a civil role might be of use in ensuring safe flight over rough terrain. The latter item is a variation on those visual systems that have been on the market for a long time. Readers may recall the tactical multi-head

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TECHNOLOGIES

cameras fixed under constantly circling aircraft that could detect and highlight alterations in the scene below. They promised the option of tying down a specific area of around one mile square where all movement was detected visually. The need for that constantly orbiting aircraft put many off but it did work and many assumed the long term answer might be some UAS based system, notwithstanding the recently mentioned Harris turret system.

Venom may well sweep some or all those assumptions aside and offer a change detection capability based on two inputs side by side for comparative analysis. This uses a reference image of photography, imagery or video overlaid with the live sensor feed to provide an eyes on change detection analysis.

Whether any or all of this will work to satisfy a customer need remains to be seen but Textron are marketing the add-on at a very keen price in the hope that they corner the market. There is however an issue that needs addressing on the marketing front as Textron has called the system Venom™ which is all very well but the last time I looked a Bell Helicopter Textron Venom is a military attack helicopter and even today a web search on the mapping product brings up the helicopters not the software.

Like many of the company displays at Farnborough the Textron campus was at best difficult to penetrate even by those that the company probably wanted there, little was user friendly and getting close to anything was as awkward as ever. The design of the facility meant that accessing most of the exhibits was impossible even at a distance. The mock-ups were tucked away in separate buildings and even the complete airframes were poorly placed for the casual passer-by.

Bell brought with them the now familiar Bell 525 Relentless mock-up, this time configured in the VIP role. With the target oil and gas market in the doldrums there were numerous plans to promote the 525 in its other roles at this year's show but any thoughts of pumping up the profile on these was set aside by the manufacturer in the wake of the unfortunate fatal 'rotor

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Then the rains came. A similar viewpoint to the front cover—the Bell Helicopter Textron compound—but this time with added rain.

strike' accident of the prototype while on test in the USA.

I doubt that those that lost their lives would have wished it but promotion of one of the major elements of the future health and wellbeing of their colleagues in the company was simply put on hold and toned down. It is perhaps fortunate that the sales staff were on hand and still able to demonstrate the features that the modified 525 had on offer but of course not promoting to the visitors and media must have had a detrimental effect upon the numbers actually seeking the tour.

Alongside the VIP Relentless a mock-up of the 505 was shielded from outside viewing. This type is one that might be of interest to 'lower end' customers who might have difficulty in accessing the interior of the Bell Textron facility and they certainly would not see it in passing. On Trade Days these might well be bona-fide industry professionals with a specific interest in seeing the type but not necessarily the right credentials to breach the tight security cordon.

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This lack of public viewing was less evident for such as the 407 and 429 but they too were hardly in your face – the majority of people passing by the fenced off enclosure would only be able to see little more than the tail rotor close up. Similarly the other Textron airframes from such as the Beechcraft King Air and the Cessna Caravan were placed such that only the chalet invitees received a good view if they decided to go outside and make a point of looking.

The Textron Aviation turboprop aircraft were being offered in both military and Airborne Law Enforcement [ALE] and covert ISR solutions with the rugged, reliable and effective Beechcraft King Air and Cessna 208 Caravan families. The King Air outfitted with the latest technology touch-screen avionics regularly seen at shows where the fit shown was the rarer Caravan sensor rear door installation.

Like many displays at Farnborough they seem to be little more than meeting places where executives hold an exclusivity. In most cases they probably had little interest in the airframes at all let along whether they faced the public excluding fence at a reasonable angle. It is now a far cry from Bell Helicopter booths of past years where the public were afforded at least some access to the aircraft. Whether its security fears or thoughtlessness is difficult to fathom.



After the rains the exhibits recover. The Scorpion is still in development as a light attack and surveillance jet.

It was much the same with the V-280 Valor, the craft they hope will be *the Future Vertical Lift craft of choice with heady expectations of replacing 2,000 to 4,000 medium-class utility and attack helicopters*. Bell are promoting this next generation military vertical lifter and in the absence of efforts aimed at the 525 this was the attention seeker of choice. Lots of pro-



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motion and media briefings but all behind the obscuring walls of a temporary building that turned into something of a covered swimming pool when the heavy rain of Monday breached its cover. The carpeted interior turned into squelchy wave-forms that had not fully dried even two days later.

The Bell 407GXP exhibited at Farnborough Air Show was shown the previous week at the Heli UK Expo, pending delivery to Topflight Helicopters as a previously announced order at this years HAI Heli Expo in Louisville, Kentucky. It is currently flying on an FAA "N" registration and will no doubt move across to the British G register in the near future. In addition to the 407GXP, Bell displayed the hoist equipped Bell 429 with an example that also featured optional mounts for sensors.

WESCAM

The story of the small L3 Wescam sensor gimbal continues and the MX-7 is no more. The latest iteration of the small sensor is the MX-8. Wescam came to the conclusion that a seven-inch gimbal was simply too small and the project was upsized to slightly over eight inches. It is expected to become available later this year and in addition to being promoted in hardware form at the air show in England was subsequently being talked about freely and promoted at the ALEA event in Savannah the following week.



Wescam's equipment for airborne, land- and marine-based platforms remains primary the MX-10, and MX-15 and it remains to be seen whether the MX-8 impacts on the existing market sector or opens up new ones in the UAV market it was primarily designed for. An attractive specification and price will tempt some manned operators who are happy to continue to fly low to get their images.

Generally the airborne emergency services sector, being small, shuns large shows but sometimes the added profile can be worth the very high cost. Many in this sector, particularly helicopters, are dragged to prominence at the show by larger cousins – Airbus is a prime example.



Police Aviation News

The Thommen searchlight on the Meeker step mount



Farnborough + ALEA

The Aerostretcher fitted into the interior of the EC135.

ON THE SMALL SIDE

Nova SYSTEMS based at the Cotswold Airport, Kemble and GVH Aerospace brought to the event an EC135T1 trial installation airframe that was located somewhat out-of-the-way outside one of the main halls.



Nova Systems, a company with links to Australia, offers a range of trial and test services to the UK military and industry using a number of test airframes and facilities.

G-NSYS is an EC135 T1 with a full Single Pilot IFR EASA Type Certificate and offering a superior Category A performance, Single Pilot IFR capability, clear cabin area and lowest direct operating costs in its class.

Nova offer a team of expert instrumentation professionals with experience drawn from rotary wing projects across both the military and civil spheres.

At the show the EC135 was fitted with a Meeker step mount similar to that seeing increasing acceptance in the market. This one was fitted with a Thommen searchlight. Also on display within the cabin was the Aerostretcher a company idea for a stretcher with integral supports for medical and life support equipment. This is still a project and the prototype clearly has issues when it comes to accessing the interior from the shallow rear access doors of the EC135 but this problem does not apply with most fixed wing types and helicopters using side access doors.

Evidence of Meeker's increasing penetration into the UK market was across the Farnborough event, the step mount has been standard on the police EC135 fleet for many years. A wholly different type of mount was fitted to the Bell 429 in the Bell compound – it is identical to that selected for chin mounts for sensors among the US law enforcement and rescue market of Bell helicopter. It shows a widening acceptance of the Meeker solution to many 'clunkier' original equipment options although these are not necessarily popular in all quarters.

The Australian link to Nova Systems is GVH Aerospace, part of whose business is operating Aeromedical and Search and Rescue Solutions for both fixed and rotary wing types in the Southern Hemisphere from offices in Queensland, Western Australia and Singapore.

DIAMOND AIRCRAFT

The static park on the flight-line in front of the substantial Diamond stand was pretty full with a broad selection of types including the new tandem trainer. The main interest though was a version of the DA42MPP now marketed as the Pandion.



Diamond DA-42 Pandion is the latest turn-key package surveillance aimed at non-ITAR markets like Africa

The principle around which the Pandion is formulated follows some elements of the motor trade, it is a Maritime Patrol Turn-Key Solution put together as a take-it-or-leave-it fixed price package.

For a current price of Euro 2.24M the airframe comes with an EO/IR sensor – a Swesystem gimbal that is not affected by the ITAR rules, a BLOS Satcom and a Maritime Radar all tied into a portable ground station.

The package is effectively a non-negotiable good-value option. Some less sophisticated customers do not know what they want in an effective airborne surveillance platform and system and some are in any case banned from having ITAR controlled items - the package consists of equipment designed to overcome that. Although available to all customers the main market is seen as Africa where a number of DA42 already serve of surveillance and security roles.

Diamond set Day 2 as its official launch of the new tandem DART 450 military trainer but it was still displayed on the flight-line before-hand and but for the rain it would have flown on the afternoon of Day 1 even though it did not officially 'exist' at that point in time.

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STRANGE PAIR

Another EC135 G-CHSU that was clearly a former Chiltern Police example right on the flightline and there was no evidence of why it was there in such a high profile position or who the owner might be. It later became evident that there is a connection with another show oddity, the bright red Boeing 727 of Oil Spill Response Ltd [OSTL].

From time to time odd, elderly and out-of-place aircraft return to grace Farnborough but few would have expected the return of the 727 to what is ostensibly the 'New Types Park' for the show. As the larger Airbus aircraft were parked some distance away the mid-size Boeing airliner pretty much dominated the spot beneath the Media Centre, its colour scheme putting other airframes somewhat in the shade.

The conversion of two examples of the tri-jet for London based OSRL equips it with folding dispersant spray bars either side of the rear air-stairs. Designated the Boeing 727-252F (RE) the airframe was the last example of the airliner produced.

OSRL is the largest international industry-funded cooperative which has the capability to respond to oil spills wherever they may occur in the world, has successfully concluded its work with British aero engineering firm T2 Aviation, to modify and deliver two the pair of former FedEx aircraft and these are now central to OSRL's aerial dispersant capability officially launched during the show. The pair are uniquely fitted with seven internal tanks, pumps and a spray boom to deliver up to 15,000 litres of dispersant liquid from low level.

OSRL's main requirement was to acquire a more up-to-date asset that could travel further and faster than the organisation's existing Singapore based Hercules.

A final-draft system specification was submitted to the UK Civil Aviation Authority (CAA) and EASA, and these have been approved. The documents have also been reviewed by the US Federal Aviation Administration (FAA). Both EASA and the FAA have now adopted the same certification standards for future large dispersant aircraft.

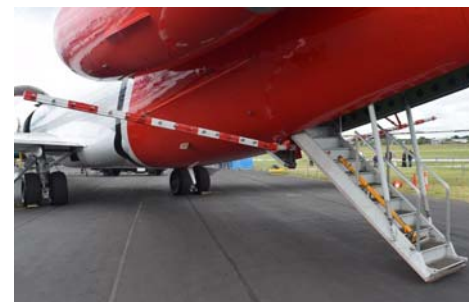
Throughout 2014, 2Excel and OSRL rewrote all the certification standards for dispersant-spraying aircraft in partnership with the regulating authorities. The new regulations stipulate that dispersant spray systems must comply with the latest flammable fluid certification requirements such as: double-skinned tanks and pipework, the ability for the system to maintain structural integrity in a crash with forces up to 9g and the capability of being vented or drained to atmosphere plus other complex compliance requirements.

2Excel operates under a global Air Operator's Certificate allowing unhindered operations throughout the world. However, building a dispersant system of this magnitude that is compatible with flammable fluids was an enormous challenge.

As with everything on Day 1 the plans to run the aircraft down the runway to drop plain water to display the spray capability were another star-turn promptly set aside by the heavenly deluge of water that halted all the displays in their tracks.

The first aircraft, G-OSRA, was completed and certified for use on April 1 this year and is now stationed at Doncaster Robin Hood Airport in the UK's North East alongside other local assets including a BN2 and a Do228. The next conversion will be registered G-OSRB.

2 Excel Aviation Ltd., are based at the Sywell Airport Business Park in Northamptonshire.



FLIR SYSTEMS

When their competitors launched a smaller sensor turret in the form of the MX-10 it was to downsize what was seen as an over spec of the product for the market. The 15 inch turret was seen to be too big and too heavy for many jobs, most civil customers simply did not need the high end capability that the larger turret offered and identical optics sat in a smaller and lighter body.

FLIR Systems, Inc. continued to believe in the 15 inch turret and their answer to the perceived problem was simply to reconfigure the shape and depth of the sensor ball to retain the overall size. Neither has lost a significant market share and both options sell so the jury is out on which is the best option. There may never be a finite answer, simply greater customer choice.

At Farnborough the company launched the new Star SAFIRE 380-HLDC high-definition military sensor variant offering a multispectral compact targeting system, designed specifically for use on military light rotor wing aircraft. The Star SAFIRE 380-HLDC provides an unmatched combination of size, weight, and power in a sensor package tailored to give attack helicopters the uncompromising ISR&T performance required to locate, identify and engage targets at maximum range. The same high-definition, multispectral imaging as available to non-military customers is added to the precision laser designator integrated into a single compact system, the Star SAFIRE 380-HLDC eliminates the need to choose between a system's size, weight and targeting performance. Its compact design, ideal for smaller aircraft with limited ground clearance, provides a superior solution for locating, identifying and laser designating targets at maximum range. www.flir.com/hldc



Now a firm attendee on the show front is the multi-company AUDES Anti-UAV system made up of elements from ECS, CHES and Blighter systems. The control station [above] was undertaking surveillance of the show grounds. Other locations where this equipment might be found were not for disclosure!



LEONARDO

Situated next door to Bell Helicopter and rarely seen as crowd friendly – at times they seem to have more security guards than exhibits – AgustaWestland/Leonardo nonetheless exhibit all their aircraft in clear view even if a little distant from the threshold at times.

Although nothing was initially heard from the manufacturer operator Bristow Helicopter finally announced the EASA approval of the Full Ice Protection System for the AgustaWestland AW189, a move that will finally put this much delayed type into UK SAR service, albeit early next due to a lengthy period of assimilation and crew training. Bristow announced: -

On Wednesday, June 29, 2016, the European Aviation Safety Agency (EASA) issued a Major Change Approval to Leonardo S.p.A. (also known as Leonardo – Finmeccanica S.p.A. and AgustaWestland) (“Leonardo”) certifying that the type design change for the AW189 Full Icing Protection System (FIPS) in accordance with NDC189G3000-002 meets the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations set forth in such Major Change Approval.

As a result of the issuance of the Major Change Approval by EASA, the Company expects that Bristow Helicopters will be able to deliver the contracted solution of 11 Sikorsky S-92 helicopters and 11 Leonardo AW189 helicopters under the Agreement following a transition period and subject to standard delivery and acceptance inspections confirming the compliance of the Leonardo AW189 helicopters with the terms and conditions of the Agreement. Bristow have so far taken delivery of three SAR AW189s of the eleven they have ordered. The company has substituted four Sikorsky S92 and four AW139 aircraft to provide cover meanwhile, and it is expected that the AW189s will gradually take over from these over the next 24 months.

A Bristow spokesperson said: “Bristow Helicopters continues to work with AgustaWestland in preparation for bringing the AW189 into the search and rescue role at the UK-intended bases. Bristow has developed a transition plan which anticipates launching the first AW189 base at Lee-On-Solent on 1 April 2017.”

Abaco Systems have a video capture, processing, and transmission system aboard the AW189 helicopter. The Abaco's DAQMAG2A high performance rugged display computer, has been integrated by Leonardo into the AW189 helicopter to provide video processing. Qualified to DO-160G and built to TRL (Technology Readiness Level) 9, the DAQMAG2A is optimised for size, weight and power (SWaP). It is designed to minimize cost, risk and time-to-market for prime contractors, systems integrators, and OEMs.

The rugged display computer has been deployed not only on the AW189, but also the AW169, the AW149 and AW101 helicopters as well as by other manufacturers on other platforms, including by FLIR Systems.

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Ukrainian Helicopters [UH] were displaying their first upgraded Mi-8 MTV-1 medium lift helicopters with the Becker DVCS 6100 Digital Audio System during the show. The location they chose to exhibit meant that the all-white helicopter was an eye-catcher.

The prime contractor Becker Avionics, have now signed a contract for the retrofit of 28 UH multipurpose Mi-8 MTV-1 medium lift helicopters with the Becker DVCS 6100 Digital Audio System.

"We are extremely excited that Ukrainian Helicopters has selected Becker Avionics for its digital communications needs" said Thomas Terschlusen, Director of Sales and Marketing with Becker.

The multipurpose Mi-8 MTV-1 medium lift helicopters are capable of performing a wide variety of air operations. Ukrainian Helicopters Aviation Company, Ukraine's largest helicopter operator, has played a pivotal role in global humanitarian, stabilization, and peacekeeping missions for more than a decade.

Becker Avionics has delivered the first Digital Voice Communication System (DVCS) system to Ukrainian Helicopters. The DVCS provides many advantages over analogue systems. It offers access to eight communication channels (expandable up to 16), eight navigation channels and remote capability for to up to six pilots/operators and up to 12 passengers. The crystal clear communications are well beyond that achievable with analogue systems.

The system is fully programmable by the aircraft operators, allowing each system to be configured specifically to that unit's needs without any additional wiring, switches or other modifications. Adding or removing function to the system, new radios or any configuration change can be done simply through a provided computer program.



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Moving on again five hours across the Time Zones to the west brings PAN to the US East Coast and a hot a steamy port called Savannah where this year's ALEA gathering took place.

The port is busy, several times a day the scene gives way to giant container ships gliding by just yards from the Convention Center windows. A spectacular and humbling sight of commerce in action.

The big annual ALEA summer events are usually selected for their attractiveness to the families of the expected delegates and in those terms the resort ticks all the boxes. The all-important US Civil War of the 1860s and the old architecture provide a backdrop suitably over emphasised to hype up the visitors.



Over hyped? Well enough to point out that one of the central elements of Savannah's attraction is that its Historic District is haunted. Well we are supposedly technical beings and police persons to boot so I hope that the only ghosts we might deign to accept are those on a Cathode Ray tube..... [anyone remember what a Cathode Ray tube is?].

Anyway we are told that there have been plenty of sightings of these conveniently located ghosts so we can only assume that at least some of the alcoholic drink is having a predictable effect but for Pete's sake avoid the Bud Light that will keep you sober for ever.

Fortunately we were there for more pressing matters, education and Networking between the fliers, the maintainers, the administrators and industry and I believe to a man we missed the opportunity to entertain the local ghosts after all.

Although the event is nominally three days, for the organising team even after many months of planning it is a full week on site. The exhibition opens midweek and runs for an evening and two five hour days but by the time the first preview evening opens up the organisers will already have been in the Convention Center for three days and some will remain at least two days after the main event is all over.

As ever the event is about information and training and at this event nine pre-exhibition sessions required no less than three days of instruction on any given subject. This is not a little bit of this and that, attendees pay a significant amount of money to become immersed in the

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theory of just one subject. Those subjects vary from an Airborne Thermographer Certification Course to a Tactical Flight Officer Course via a Unit Managers Course and those full days are exactly that - 0800 to 1700. At the end those attending can take back to their unit certification that confirms both their attendance and their new or re-polished skillset.

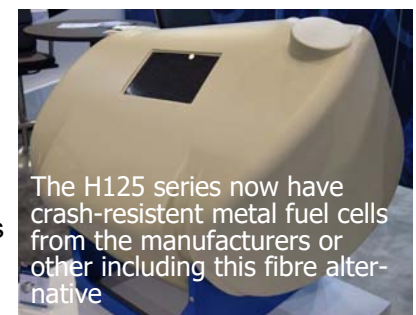
The nine training events are not all, a range of other, shorter and free, meetings and technical presentations are available over the exhibition days to sit in. These typically last anything from half an hour to two hours and cover similar subjects and additional niche subjects that are not attracting major levels of interest.

All events are different and depending on the location the numbers of attendees from members and industry will inevitably vary. Despite being East Coast and easily accessible by road from such as Florida and New York, Savannah is one of the quieter events. If ALEA were able to hold every event in Orlando they would never need to ponder whether the numbers would suit the exhibitors - although the number of family members might well skew the result. The numbers this year were fine but everyone understands it is never numbers it is more the attendance of the decision makers and those with the purse strings. You can never be sure how many of the 200-300 professional delegates are just the right people.

The number of exhibitors was average although actual aircraft exhibits were lower than at recent events. Whether this is financial factors or simply awkward logistics is difficult to judge. The effort required to get



Just a few of the UAVs on display at the show



The H125 series now have crash-resistant metal fuel cells from the manufacturers or other including this fibre alternative

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fixed wing exhibits in from the distant local airport was probably prohibitive. Unusually there were no local aircraft in the hall although the three yellow MDs of the Savannah based Chatham County Mosquito Control which undertake local law enforcement were present in the air over the Convention Center demonstrating Powersonix sky speakers [left] and again landing on outside one evening [right] in support of an MD Helicopters sponsored event.





What was new at the show?

Probably the major surprise item was on the Churchill Navigation Booth. Churchill Navigation's Augmented Reality System (ARS) brought an airborne mission management system to the market that in its time provided a radical improvement in situational awareness. ARS overlays addresses, street names, parcel information, business names and any other data of interest directly on top of real-time sensor video which increases crew effectiveness and simplified their workload in providing all the information needed on a single display. Even though the product was dismissed as unimportant and flawed because it was based on a Windows system it sold, took market share and it made the industry sit up and pay attention. It led to important advances across the airborne mapping industry and enhanced the potential of everyone's products and did not do any of them much harm [eventually].

Now Churchill are in the preferred band of map suppliers and their booth space was amongst the largest in the Savannah. In the centre of the booth was a new product that was a bit of a show stopper even though Churchill were not actually promoting it in press releases or even an announcement. It adds another element to their range – time will tell whether this product will have far reaching consequences to the order that ARS had.


It seems everyone is intent on getting into producing FLIR equipment and going head to head with the likes of FLIR Inc and Wescam. Controp was in town promoting their sensor

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- Fully compatible with our Kinetic™ ISR, MTI and Speed technologies



MX-10

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range, along with Cloud Cap and Trakka with the dual camera searchlight range it launched last year.

But no-one except Tom Churchill was expecting the launch of the Churchill FLIR. This is no bought in badge engineering, it is made in-house and the quoted price should make it attractive and should also worry the big two. But not yet it seems. It is being dismissed. Give it time, I seem to recall a similar dismissive attitude to the Trakka searchlight a decade ago.

The Textron stand brought together Beechcraft, Cessna and Bell Helicopter but only two airframes – a helicopter and a Cessna single.

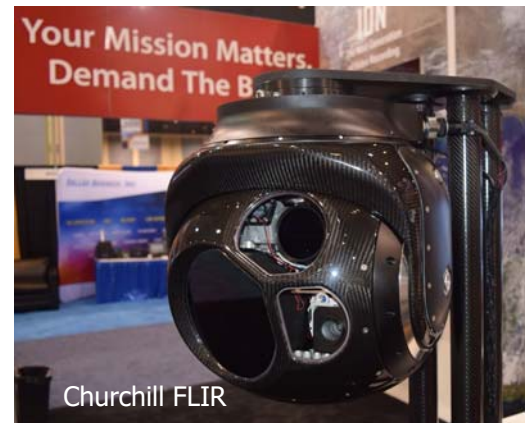
The Bell 429 of Georgia State Patrol N924SP [57151] is greatly liked and much prized. The ability of most US air units to buy and maintain a twin-engine type is very limited. They have bought one but getting enough finance for another is going to be difficult. The Georgia State Patrol is sold on the Bell product line but knows its limitation and their other recent acquisition is not new and therefore was elsewhere in the hall. For the time being Bell 407 N429LC [53760] remains in the paint scheme of its former writer owner eight months after it joined the fleet, the role-fit is in place but paint jobs are expensive and this one can wait until it shows signs of real wear.

In comparison the Turbo Stationair on display at the Bell booth was perhaps a large step down but not all can afford helicopters let alone expensive twins and this show is primarily about presenting to the ALEA members clear options on where to spend their taxpayer dollars whether in brochure form or with hardware.

Other airframes on the floor of the show included an AS350B3 N176SC from Seminole County Sheriff, Florida representing the ubiquitous H125 on the Airbus Helicopters booth, a Robinson R66 Police N88911 of L.E.A.S.E., the Leonardo 009, a Cirrus and the Martin Aircraft Jetpack manlifter and associated virtual reality simulator.

The Jetpack of course needs many a question answered. Clearly it is a leisure tool and anyone who has a few thousand dollars to spare is welcome to one. However, if it is seen as a viable law enforcement tool to what purpose? We have seen this many times before An inventor produces a craft and then declares it 'perfect for law enforcement' [air ambulance, SAR, rock climbing tea making etc etc] without actually selling the concept as seen.

The ALEA Expo was seen as a great opportunity to present the Martin Jetpack to potential first responder customers in the US according to CEO and Managing Director Peter Coker but there was little evidence of just how the concept might be applied to ALE either on the booth or on the website. Martin partnered with surveillance provider Avwatch Inc., based in Plymouth MA and they clearly think that the ALEA event was worthwhile. All that was clear is that quite a few were thoroughly enjoying themselves in the simulator.



Churchill FLIR



H125



Martin Aircraft

The Jetpack delivers a single officer, the pilot, to a location and appears not to give him the mechanical tools – sensors – to undertake a role, any role other than visual observation. In all probability he cannot even return fire. I assume there is a clearly defined role envisaged for Martin to invest in visiting the event but it is not yet clear what that is.

And if I accept that the manlifter has half a chance of being acceptable as an airframe perhaps I might include a dozen small UAS scattered across the show?

On the MD stand was exhibited a single MD 530 N1685K of the Gwinnet Sheriffs unit. This was a recently completed upgrade of a long operated MD500E and undertaken in the factory for the unit.

The deal set up in 2015 was the rebuild of its 27 year old MD500E helicopters into MD530F models in the factory at a cost of \$2.47M. New airframes would have cost \$8.4M. In addition the camera system will be upgraded to FLIR STAR SAFIRE 380HDc thermal infrared compact imaging systems that will cost the county \$800,912. FLIR Inc. was awarded the contract for the infrared compact imaging system while Rotor Resources LLC was picked to do the re-wiring, night vision goggle lighting and searchlight replacement.

I must say that the airframe did not in any obvious way betray its origins as an 1988 build machine.



The MD Helicopters Booth



The FLIR 380HDc on the MD530F



MD500E of Chatham County

Two of the exhibitors. Thommen [right] the Russian sourced Swiss searchlight and United Rotorcraft [left]. United Rotorcraft is one of the major US vendors for helicopter completions, painting and MRO. They have their own Engineering and Certification Department, a Manufacturing Department, an Aircraft Interior Department and a new paint booth approximately of some 2,000 square feet; and capable of painting something the size of a Blackhawk..

They also have Organization Designation Authorization (ODA), the ODA authorization allows them to conduct supplement type certification with minimal FAA involvement.





PAR had its own booth to look after during show time it is difficult to be too certain but during regular passes there appeared to be little real interest shown in the only airframe exhibited by Leonardo/AgustaWestland. It might have collected a very new name and a smart bit of arty paintwork but it must still be a bit of a niche customer that will go for the latest incarnation of the rugged SW-4 the AW009.

For any US unit to select a wild card like this is going to require some massive financial incentives on the acquisition front and probably in service as well.

The 009 comes with an advanced and attractive 'Genesys' avionics display as standard is alternatively powered by the mission-proven Rolls-Royce M250-C20R/2 (SP) engine ensures reliable, high performance or the optional M250-C30P upgrade but that 'mission proven' statement is made on the back of hundreds of home grown Bell 206 variants and the first question that has to be answered before embarking on a 009 from a far off manufacturer is why not a 206?

The next annual ALEA Expo will take place in Reno, Nevada



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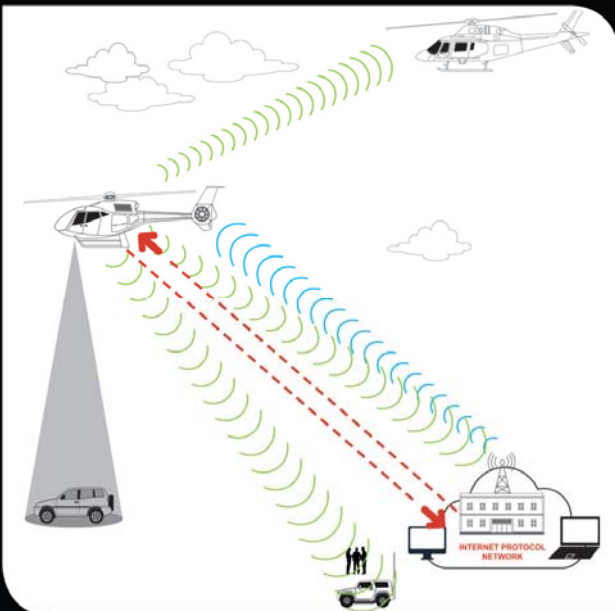


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An important element of the annual ALEA event is the awards ceremony at which US units received recognition for meeting the basic safety and operating standards set by ALEA and the Public Safety Aviation Accreditation Commission, and units and individuals were given awards for specific endeavour .

Among those receiving recognition at the 46th Annual Awards Reception were the recently retired Jack H Schonely [Los Angeles PD], pictured right centre and a quartet from Canada.

Much of this event is US centric [but that is where the main membership lies] so the large number of Canadians so honoured shows that ALEA is trying to put out an international face.



Tyler Tebbutt and Chris Anderson of the Edmonton, Alberta unit took the Gus Crawford Memorial Aircrew of the year and Chris additionally too TFO of the year .

Wade Bourassa and Kristopher Kluz from Saskatoon took the Fixing Operator of the year award.



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