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Issue 284

December 2019



#### **EDITORIAL**

Last month, following a slightly delayed Freedom Of Information (FOI) request, some 'missing' examples of the NPAS Strategic Board minutes arrived in the office. And welcome. The public posting of minutes on the web site suddenly ceased in mid-2018 and informed knowledge of the thought processes in Wakefield suffered as a result.

The previously unseen content was not delivering earth shattering news, but it did resolve numerous questions and put right several errors of fact that the lack of concise information had allowed to develop in these pages.

West Yorkshire Police tell me that NPAS plan to restore the public availability of the minutes on the website in future but they are currently still missing.

Later in the month I happened upon an article in *The Atlantic* by one Jerry Useem [no, I had never heard of him either] in which he put down the root of Boeing's recent troubles to a 2001 decision to move the company headquarters from alongside the factory in Seattle to Chicago some 1,700 miles away from any of the company factories. In his piece Useem asserts that the distance canted the focus of the business from engineering to money and as we know, money is the root of all evil. How dare he?

I am tempted to wonder whether we could change the name of the entity but draw similar conclusions about why police aviation is struggling in the UK. Not enough people with working day insider information drawn from living next to the factory floor in positions of influence - aka a presence on the Strategic Board.

Now I have been able to yet again see the Strategic Board minutes, and run my finger down the all too long attendee list, I notice that even with an influx of nominally expert project managers the number of people with any hands on aviation experience is woefully low. I suspect that money talks here too.

Bryn Elliott

# **LAW ENFORCEMENT**

#### **AUSTRALIA**

**NEW SOUTH WALES:** The NSW Police Force Aviation Command has celebrated 40-years in operation with a commemorative flight over Sydney Harbour in honour of the unit's proud history serving from the sky to prevent crime and protect the community of NSW.

The Aviation Command commenced operations in 1979 at Sydney's Kingsford Smith Airport with the procurement of its first helicopter – a Bell 206B Jet Ranger III, with the call sign PolAir 1. Following the success of the aircraft, the branch purchased two more Jet Ranger's just one year later, known as PolAir 2 and PolAir 3. PolAir continue to patrol from above with a fleet of five helicopters and three fixed-wing aircraft, travelling across the state from coast to country, a vast area of more than 800,000 square kilometres.

As the only airborne law enforcement unit in NSW, the branch comprising more than 70 staff, including police officers, special constables and civilians trained as pilots, tactical support crew members, and engineers, provides specialist support to NSW Police officers on the ground for search and rescue operations, tactical operations, specialist transport, and regular patrols. In the last year alone, PolAir has conducted 459 search and rescue operations, responded to 138 pursuits and located 232 missing people.

In June 2019, a new aviation facility was announced with the assistance and funding of the NSW Government. The hangar, which will remain based at Bankstown Airport, will be purpose-built for the NSW Police Force Aviation Command, and is due to be completed by July 2020. The total developed exceeds 25,000m2 and will include office space, an aircraft hangar, taxiways and a carpark.

**COVER:** – Helicopter Association International (HAI) announced that the Los Angeles County (California) Fire Department Air Operations LACOFD Sikorsky S-70 Firehawk helicopter teams are the 2020 recipient of the Salute to Excellence Humanitarian Service Award. The award honours the person or persons who best demonstrate the value of helicopters to the communities in which they operate by providing aid to those in need. Image via HAI

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#### **AUSTRIA**

FLUGPOLIZEI: With the recent arrival of the two Airbus Helicopters H125, in early November the BMI withdrew from service Eurocopter AS355N OE-BXX c/n 5558 which had been in service with the Bundesministerium für Inneres since 1993.

The helicopter has been used for police and air ambulance work, spending some time on lease with OAMTC in 2001-03 before returning to police work.

#### LUXEMBURG

**GRAND DUCAL POLICE:** Airbus Helicopters has delivered the first of two H145M multipurpose helicopters for defence and security missions to the Government of the GrandDuchy of Luxembourg. Together with the helicopters, Airbus also provides a training and support package to its customer. The delivery of the second helicopter is scheduled before the end of the year. The delivered H145M is the first H145 in Luxembourg.

The helicopter is equipped with a hoist, a fast roping system, a high-performance camera, a search light, advanced communication systems, and will have provisions to install a light armour protection kit. The latest technologies to allow the helicopter to operate in adverse weather conditions and during night-time are incorporated in the design. The helicopter will be operated and serviced at Luxembourg Findel Airport. With a maximum takeoff weight of 3.7 tonnes, the H145M can be used for a wide range of tasks, including troop and passenger transport, surveillance, air rescue, reconnaissance and medical evacuation.



Powered by two Safran Arriel 2E engines, the H145M is equipped with full authority digital engine control (FADEC) and the Helionix digital avionics suite. It includes a high-performance 4-axis autopilot, increasing safety and reducing pilot workload. Its particularly low acoustic footprint makes the H145M the quietest helicopter in its class. [Airbus]



**POLICE:** After a brief flight test programme the Dutch EC135P2 PH-PXA departed Staverton on the morning of November 1, 2019. It stopped off at Southend Airport en-route before the short oversea flight returning to the Netherlands.

These images of PXA outside the Babcock facility at Staverton Gloucester Airport were taken during the acceptance process the day before departure.

Days later arriving at Staverton on Monday November 4, the latest Dutch Police EC135 for upgrade by Babcock was PH-PXB.

Ed: This Netherlands contract is important to Babcock and they have always been a bit jumpy about any information about it coming from them. Overall it seems they clearly frown on the activities of the photographers who take such a great interest in their comings and goings. Reports suggest that they, Babcock, have been taking images of the photographer themselves! Probably a bit excessive if true.

#### **PHILIPPINES**

**PNP:** In a boost to its surveillance, firepower, and mobility, the Philippine National Police (PNP) recently obtained five helicopters, a fleet of drones, land vehicles, and a stockpile of firearms. The helicopters were two Robinson R44, an Airbus Helicopters H125 and a single Bell 429. In addition the PNP have purchased 51 vertical lift drones.



The PNP displayed the newly procured items in a presentation ceremony in its national headquarters, Camp Crame in Quezon City on November 18.

The PNP now have five helicopters with five more ordered from Airbus, two to arrive towards the end of this year and three more in the middle of next year.

#### **TRINIDAD & TOBAGO**

**AIR GUARD:** The Government of Trinidad & Tobago has lost its case and appeal against Cobham Helicopter Services Ltd.

The case arose from a two-year maintenance and support contract entered into in March 2017 for the support of four Leonardo AW139 helicopters acquired in 2009. After the contract commenced, and faced with higher than expected costs, the Government decided to unilaterally reduce the contract to one year. Cobham eventually cancelled the contract and were owed income from it.

The Office of the Attorney General (AG) has lost its appeal over a US\$10M lawsuit for the main-tenance of the Air Guard's helicopter fleet. The Attorney General held that the contract was not valid because it was not approved by the Central Tenders Board. The judges disagreed and ruled that even if it was not valid the Defence Force had taken advantage of the goods and services provided by Cobham and should pay for them.

The State is now expected to pay Cobham the monies owed - \$10,638M - and the court costs. [Guardian]

#### UNITED KINGDOM

**NPAS:** There have been management changes at NPAS in recent weeks, they are currently seen as a temporary measure.

The operation is still headed up by Chief Superintendent Scott Bisset but Ollie Dismore is currently relieved of his title of Director of Operations, National Police Air Services. His former role has now been split between the NPAS Chief Pilot Paul Watts taking on the aviation aspects and T/Chief Inspector Pitkin looking after the policing aspects.

Meanwhile the move has allowed Dismore to be loaned to represent NPAS within the National Police Chiefs Council [NPCC] Police Aviation Review, which is a national piece of work that has been in progress since the damning HMICFRS study back in 2017. He will be working with the group, including Richard Brandon, the former Metropolitan Police Unit Executive Officer and recently the National Aviation Project Manager, in formulating a plan to be seen as 'NPAS Future'. This is the latest stage of a Police Aviation Review that was set up in 2018 and clearly has some distance to run yet. The temporary transfer looks set for a review in March.

The fleet of four Eurocopter EC145 helicopters operated by NPAS is a mix of three former Metropolitan Police airframes and a singleton from Devon & Cornwall. Although visually similar there were many detail differences that made it difficult to run them as a unified fleet. Despite the difficulties presented several minor upgrades have led to a growing commonality, the latest of which has been a common systems refresh with Curtiss-Wright equipment.

The fixed wing operations will go ahead in the New Year. I have been unable to ascertain on what basis they will fly but in the recently viewed minutes from the Strategic Board it appears clear that the 'insoluble' problem that existed previously has now been resolved. The original specification called for Flight Into Known Icing (FIKI) which it has now apparently met in full. Operations will commence with a single aircraft available 24 hours and build up to two with a third part time. One airframe will always be off-line in maintenance. This detail is drawn from the recently released editions of the Strategic Board minutes and therefore some months old.

Vislink Technologies, Inc. has announced the renewal of three-year service contracts with twelve (12) UK Police Forces. These multiple contracts extend the customer support Vislink provides for its previously sold and installed Airborne Data Link (ADL) infrastructure being used in UK Home Office police operations. The contracts will have an aggregate value of approximately \$500,000 over the three-year period.

This represents the second three-year renewal of the contracts and includes recurring maintenance, warranty service and training.

There is also the potential for purchases of upgrades to installed ground infrastructure, as Vislink incorporates new technologies that increase capabilities for the police forces. This includes deployment of the Vislink TSM-2020 video aggregator. The TSM-2020 allows the onward transmission of airborne data to tactical ground forces deployed with smart phones and tablets over 4G and coming 5G networks.

The Vislink solution encompassed the installation of an entirely new integrated video datalink system, that included the delivery of over 200 mobile, portable and fixed equipment items. The UK-wide rollout of Vislink equipment has delivered significant improvements in range and video quality. During joint operations, regional forces and national agencies can now access ADL images transmitted from aircraft using portable and handheld equipment. The images can also be viewed at regional command and control centres throughout the UK.

The increased situational awareness delivered by the Vislink solution has provided the police forces the means for faster and more accurate decision making, while enhancing the safety of the public and law enforcement personnel.

**SCOTLAND:** In the wake of the recent Sheriff's report into the Clutha Bar crash in Glasgow there are clear signs that many of those involved are not happy. Relatives of the pilot and the other deceased do not accept the absolving of Airbus Helicopters and the EC135 fuel system from culpability and they are threatening to pursue the matter in the courts.

#### **UNITED STATES**

**CALIFORNIA:** San Diego plans to spend \$21M over the next five years replacing the Police Department's ageing fleet of four AS350B3 helicopters with the latest H125 model.

The City Council approved a five-year agreement with Airbus Helicopters to immediately buy one helicopter for \$4.6M and purchase three more for \$5.5M each before the deal ends in 2024. The council will be required to approve each of the additional helicopter purchases based on whether the city has adequate resources at the time. The plan to replace all four helicopters, acquired in 2004-06 is based on recommendations from a 127-page report, by Conklin & de Decker in 2017. Each helicopter has logged more than 10,000 flight hours, they will be trade into Airbus for around \$800,000 and \$1.2M each.

The new helicopters are similar enough in size and shape that the city plans to continue storing its police helicopters at Montgomery-Gibbs municipal airport in Kearny Mesa.

Two years ago, the council approved upgrading the city's firefighting helicopters to boost suppression of wildfires. The city agreed to spend \$34M to buy a Firehawk and build a new hangar at Montgomery-Gibbs to house it. The new helicopter increased the size of the city's firefighting helicopter fleet from two to three.

**FLORIDA:** The are availability issues and training affecting the air support operations provided by the Orange County Sheriff's Office (OCSO). The unit, based at the Orlando Executive Airport,

OCSO is limiting flights by its three helicopters and is reported to be turning down calls for air support due to maintenance-related issues. When one or more of the law enforcement agency's helicopters is grounded for maintenance work, OCSO reduces the number of missions flown by its other helicopters to minimize wear and tear on the fleet. This lack of flight time availability is stated to also be affecting continuation training of TFOs at the unit.

The OCSO is still responding to high-priority calls including missing persons, vehicle pursuits and incidents presenting an immediate danger to the public, but tends to decline lower priority missions including



foot pursuits, surveillance flights, fire rescue support, homeland security and disaster-related missions, as well as support for SWAT and K-9 operations.

The reason publicly put forward by the OCSO, is the inability of the agency to acquire aircraft parts from Bell. In turn the manufacturer acknowledges the complaint and its efforts to ensure the parts are available.

According to the investigating journalists at News 6 this state of affairs has been noted over the last two years and is supported by newly released records. The number of calls recorded as refused over the period is said to be 130 but News 6 believes there are many additional times OCSO deputies or outside agencies did not bother requesting a helicopter knowing the call would likely be denied under the maintenance matrix protocol.

The OCSO operates three Bell 206/407 helicopters and a single-engine Cessna. The latter is not seen as a suitable response aircraft due to its equipment, lack of flexibility, its time to launch and a need to fly higher

According to the documents seen by News 6, the number of missions flown by OCSO's Aviation Section has been reduced by nearly half in recent years, in the same timescale the overall number of calls for service to the Sheriff's Office has grown slightly. In 2016, when OCSO operated four helicopters, the Aviation Section responded to more than 6,200 calls. That number dropped to fewer than 4,500 calls in 2017. At that time the agency retired one of its ageing OH-58s and took another 22-years old helicopter out of service for a major upgrade undertaken in Louisiana that took 15 months. After operating daily for eight months it was again out of service for most of this year. It is the length of these extended engineering downtimes that is being blamed on Bell parts deliveries.

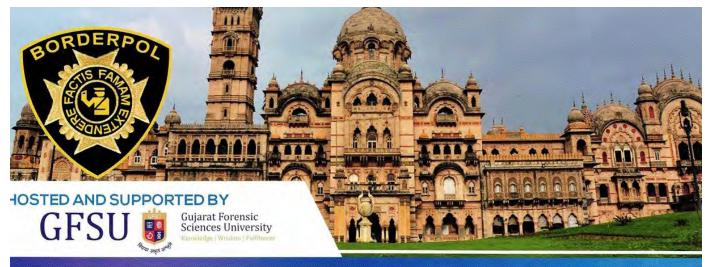


Bell has long had a first-class name among its users for timely spares support and regularly 'wins' the poll of best customer support in magazines such as Professional Pilot in the USA. Enquiries by the journalists investigating this story found no similar cases of poor parts deliveries from Bell with other Florida based law enforcement agencies flying the Bell product, specifically agencies in Osceola, Marion and Volusia counties. [News 6]

**NEW MEXICO:** The State Police have exchanged their Agusta A109 N606SP for a new, significantly more capable, Airbus Helicopters H145 N607SP. The new airframe offers the unit significantly more space and lifting capability and allows them to start using a hoist in their rescue work.

The unit flew the Agusta direct to the Airbus facility for the changeover.





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# **AIR AMBULANCE**

#### **AUSTRALIA**

**NEW SOUTH WALES:** Australia's New South Wales (NSW) Ambulance Service is the 2020 recipient of the HAI Salute to Excellence Golden Hour Award. This award recognises the efforts of an individual, group, or organization that, through a particular activity or contributions over time, has advanced the use of helicopters in the vital mission of air medical transport.

In the 1980s, the NSW Ambulance Aeromedical Rescue Helicopter Service provided a patchwork of rudimentary capabilities across multiple providers. The organization operated successfully for three decades, but the group needed to evolve to ensure it could continue to provide the efficiency, capabilities, and safety standards expected of a modern aeromedical service.

In 2012, the NSW government undertook an independent review that resulted in a 10-year strategic plan to ensure significantly improved patient outcomes for all residents and communities across the state. The review determined the plan could be achieved only by completely transforming the state's contracting and services delivery model for aeromedical support and by standardizing that model's integration with NSW medical services. The ambitious plan would then require implementation by a strong team.

Ron Manning, the ambulance service's director of aeromedical services, and Garry Sinclair, its head of helicopter operations, were true leaders and patient advocates who knew that such transformational change would require vision and courage. The plan would have to entail improved patient outcomes and integrated team training to support a holistic environment and safety above all else.



Today, NSW Ambulance (as the organization is now known) boasts the largest aeromedical helicopter capability within the southern hemisphere. From 7 bases across the state, the service operates a standardized fleet of 12 Leonardo AW139 helicopters in identical aircraft and aeromedical configurations utilizing a common set of operational procedures and standards. The service ensures that NSW Ambulance helicopter doctors and paramedics can quickly reach patients in remote areas. Over 96% of the population of NSW is within one hour of a helicopter and its critical care doctor and paramedic team.



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#### **IRELAND**

**RAPID RESPONSE:** Ireland has not had helicopter air ambulances for long, a charity air ambulance is even newer. The Irish Air Corps used its Leonardo AW139 helicopters to operate The Emergency Aeromedical Service (EAS) since 2012 without interruption as the only air ambulance service in the state until the charity started service.

Irish Rapid Response the charity-funded air ambulance service based in Co Cork has only been operating for 3 months and yet it is now seen as the saviour of the service. They are to bring in their relief aircraft to operate from a new base in Roscommon for four days a month in a move to shore up cover for the emergency services in the midlands and the west.

The move follows a decision by the Department of Defence to withdraw the Athlone based military air ambulance for sixteen days between now and February due to training and staff shortage issues.

Run on €2m of funds raised annually by the community, the Millstreet-based Irish Rapid Response air ambulance service only came into operation last August and has already completed hundreds of missions dealing with road accidents and medical emergencies in the south of the country.

But now the base's second relief helicopter and its crew will move north to a new base at Roscommon University Hospital for four days a month after a withdrawal of the Department of Defence service there. The military will not be in a position to run the service for four days per month for a period of four months. During those 16 days, the Irish Coast Guard will also provide reserve cover to the National Ambulance Service.

#### UNITED KINGDOM

**GREAT NORTH:** A newer AS365N3 is due to be taken into service in the new year. The Great North Air Ambulance Service (GNAAS) has commenced the purchase of a pre-owned £5M Airbus Helicopters AS365 Dauphin N3+ which will join the operation in the Spring next year. Selecting a used airframe significantly reduces the cost of acquisition. The aircraft is only four years old and has just 360 hours of flight time.



The charity, based at Urlay Nook, Eaglescliffe currently owns three Dauphin N2 aircraft which are each nearly 30 years old and hopes this new generation of aircraft will meet the demands of GNAS's 8,000 square-mile area of operations.

The new aircraft is currently undergoing an extensive refit which will transform it from executive transport to a 'flying emergency department'. The variants of Dauphin is considerably more powerful and can therefore carry more fuel, which in turn gives it a greater range.

It is also equipped with the latest form of digital autopilot and the medical fit will offer 360 degree patient access in the rear cabin. Two of the charity's existing fleet have now been made available for sale, proceeds from which will help pay off the new aircraft and also potentially secure a second upgraded helicopter.

Last year, GNAAS responded to 1640 call-outs throughout the North-East, Cumbria and North Yorkshire. The annual cost of providing the free at the point of contact service is £5.3M, all of which was raised through donations. <a href="https://www.gnaas.com">www.gnaas.com</a>

**WILTSHIRE:** After the best part of a year without the use of its own Bell 429 helicopter the Wiltshire Air Ambulance has received its Air Operator Certificate (AOC) and the Bell returned to Helicopter Emergency Medical Service (HEMS) in early November.

The charity is now just one of four UK air ambulances who hold their own Air Operator Certificate.

Wiltshire Air Ambulance chief executive David Philpott says: "This has been a hard slog and has taken a lot longer than we anticipated – and a lot longer than it really should have.

"I would like to thank everyone who has worked tirelessly for the charity to get the AOC; they have all gone the extra mile.

"Our trustees have provided rock solid support throughout the process. Equally the backing from our Ambassadors and local MPs has been very welcome.

"Our pilots, paramedics and charity staff deserve immense credit for their work during this challenging period, along with our dedicated volunteers who are out supporting the charity at events come rain or shine. "Importantly we are now able to return to what we are here to do, providing helicopter emergency medical services for the people of Wiltshire and surrounding areas."

Although the brightly coloured airframe has continued to feature as a backdrop to the majority of marketing occasions in the intervening period operations have been precluded since the operator went out of business. The Bell was maintained to a flightworthy standard.

The Part 145 support for the Bell is now undertaken by Heliwork Services (Thruxton), with AS Aerospace at Denham undertaking avionics maintenance and repair. WAAT hold the EASA Part M (Continuing Airworthiness Requirements) approval but the CAM (Continuing Airworthiness Management Organization)



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services are provided by A2B Aero & Heli (Maintenance) Ltd., at Oxford. Giorgio Bendoni is the Accountable Manager. [WAAT]

#### **UNITED STATES**

**TEXAS:** At last month's Air Medical Transport Conference (AMTC) Leonardo presented the first AW169 EMS helicopter fleet in the United States. Travis County's three AW169 EMS helicopters assist rescue efforts in south central Texas, an area with over 1.2 million people that includes Austin.

STAR Flight is the only 24/7 helicopter EMS provider in Texas that performs highly specialised rescues including emergency medical transport, still and swift water rescue, search and rescue, high angle rescue, fire suppression/aerial reconnaissance, and law safety assistance. STAR Flight also transports neonatal, pediatric ICU, and high risk obstetrics medical teams and patients. Travis County's new fleet of AW169s is equipped with a rescue hoist and 300-gallon Simplex belly tank for fire suppression.

Leonardo's AW169 EMS helicopter provides more power and range than competing light-intermediate twin engine models. The AW169 features a superior cabin size—transporting up to two patients and five medical personnel plus critical care equipment—with flexible interior layouts that provide 360 degree patient access. Wide doors offer smooth and efficient patient loading, while a roomy baggage compartment stores extra equipment and stretchers. Large windows support emergency egress, and one engine-inoperative capability offers outstanding safety. With a full ice protection system available as an option, now under development, alongside the model's hot and high capability, challenging weather won't hold the AW169 down.

With orders for over 200 AW169s placed by customers worldwide for a large range of missions to date, the type has already been chosen by rescue and parapublic operators in several nations including Italy, UK, Japan, Republic of Korea, and New Zealand to name a few.

# **FIRE**

#### **ARMENIA**

**EMERGENCY SITUATIONS:** The Black Sea state to the east of Turkey is to have helicopters to fight fires and other emergencies. Armenia's emergency situations minister Felix Tsolakyan held a press conference early in November on the prevalence of fires in the region. This year the country recorded 3,000 more fires than during the earlier years. During this year the country had upgraded its low tech equipment with deliveries from Japan and Russia imminent. To these vehicles will be added a helicopter which will be operated in conjunction with the Defence Ministry.

Ed: Currently the Armenian Military operate several Mil Mi-8 and Mi-2 helicopters.

#### **CANADA**

**VIKING:** First introduced in 1967 by Canadair, the original CL-215 had piston engines. When Bombardier bought the company in 1986 and obtained the type certificate for the aerial firefighter, it spearheaded a turbine engine conversion in 1989 and named it the CL-215T. Subsequently, the manufacturer developed the turbine-powered CL-415 in the 1990s.





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The amphibious aircraft are capable of scooping just over 6,000 litres from a body of water within 12 seconds. After flying to a fire, the aircraft drop their loads and return to the water source to do it all over again.

There are just under 170 Canadair amphibious firefighting aircraft flying worldwide, and while each may only log 200 to 300 flight hours annually, their missions are demanding. The dated avionics of the original aircraft are posing a significant challenge. As new technologies are taken into service the aircraft avionics are becoming obsolete and that is starting to restrict the airspace they can operate in.

Viking is working on a cockpit upgrade designed to provide the airframes with an extended service life up to 25 years. The actual alterations are based upon the results of a survey of existing operators into their needs.

The Avionics Upgrade Program (AUP) for the Canadair CL-215T and CL-415 aircraft was launched in May 2019. It will be undertaken by Cascade Aerospace of Abbotsford, British Columbia and has at its heart the Collins Aerospace Pro Line Fusion avionics suite with embedded display system. The first CL-415 will be used as the prototype and is expected to be completed "with all the options" and certified by the end of 2021 and will be the CL-515. [SkiesMag]





#### **UNITED STATES**

**CALIFORNIA:** Los Angeles County Fire Department Air Operations selected Becker Avionics' ADS-B transponder, the BXT6500 series for retrofitting their existing fleet of helicopters. LACOFD operates a fleet of Bell B412 and Sikorsky S-70 helicopters. With the FAA ADS-B mandated deadline of January 1, 2020 quickly approaching, LACOFD selected the mission capable BXT transponder to become ADS-B compliant. The quick installation took approximately 30 hours to complete and was accomplished by LACOFD's capable maintenance department.

The BXT6500 transponder series is a robust, cost-effective and ADS-B compliant transponder that combines unique customer benefits, such as reduced size and weight, durable housing without ventilation slots or forced cooling, antenna diversity or single antenna configurations, digital interfaces, TCAS compatibility, and special mission capabilities.

Helicopters have played a vital role in fighting the recent wildfires in Ventura County, but a couple of new and specialized ones bought by the county aren't in the fight just yet. Three surplus Sikorsky's were purchased back in 2018 for \$7.4M.

Copter 2, a 2007 Firehawk helicopter, converted from military use, arrived at the Ventura County Air Unit back in August, and will offer capabilities superior to the county's current copters. Unfortunately, it was still undergoing refurbishment and grounded for repairs during the height of the fires. It was at Rotorcraft Support Inc., in Fillmore, having FM radio installed.

The Firehawk, formerly a Sikorsky UH-60L Black Hawk, can travel up to 165 mph and carry 1,100 gallons



of water. That's about three times the capacity of the older 1969 Bell UH-1 Iroquois helicopters in service at the Ventura County Air Unit. The older aircraft, Copter 7 and Copter 8, have been operating 24 hours a day. They are far Ider than the Firehawk but can haul up to 350 gallons of water to the fire.

Two helicopters, one of them Copter 2, will be operational and the other will be used for spare parts.

**CALIFORNIA:** HAI has announced that the Los Angeles County (California) Fire Department Air Operations LACOFD Sikorsky S-70 Firehawk\_helicopter teams are the 2020 recipient of the Salute to Excellence Humanitarian Service Award [cover story].

This award recognises the efforts made by the flight and ground crews of the four S-70 Firehawk helicopters while battling the 2018 Woolsey Fire, the largest wildfire on record in Los Angeles County. The fire destroyed nearly 97,000 acres, with 1,643 homes lost and more than 295,000 people evacuated at its peak.

The Woolsey Fire began in early November 2018, near the borders of Ventura County, Los Angeles County, and the City of Los Angeles. The four S-70s joined multiple other aircraft and ground crews battling the conflagration over the next four days. While the flight and ground crews rotated as necessary, the helicopters themselves were shut down only for refueling and inspection. This resulted in the four helicopters flew 119.4 flight hours in the first three days—equivalent to almost an entire month's worth of flying and maintenance in one week—completing more than 350 water drops amid winds ranging from 40 to 70 knots.

In addition to the efforts of the flight crews, the maintenance and support crews worked tirelessly on the ground. Operating in 24-hour shifts, the maintainers kept the aircraft available for every launch, ensuring they were always safe and ready to go. A majority of the 20 people on the maintenance team volunteered into the night and weekend to ensure that routine maintenance was performed efficiently and safely.

# SEARCH & RESCUE

#### CROATIA

**COAST GUARD:** After a successful two-month maritime surveillance services of Schiebel's CAMCOPTER® S-100 for the Ministry of the Sea, Transport and Infrastructure of the Republic of Croatia, the European Maritime Safety Agency (EMSA) extended the contract to the end of the year.

The S-100 is based on the Croatian island of Brač and routinely carries out regular day and night patrolling flights, on-demand incident monitoring missions and specific inspection operations. The extension comes after operations amounting to 67 missions and 210 flight hours so far.

The S-100 is equipped with a Harris L3 Wescam Electro-Optical / Infra-Red (EO/IR) camera, an Overwatch Imaging PT-8 Oceanwatch payload and an Automatic Identification System (AIS) receiver.



#### UNITED KINGDOM

**COASTGUARD:** Coastguard rescue teams from Lerwick, Hillswick and Sumburgh, the coastguard SAR helicopter crew from Sumburgh and staff from the Coastguard Operations Centre in Shetland have been awarded the prestigious Department for Transport Rescue Shield by Brian Johnson, Chief Executive of the Maritime and Coastguard Agency.

The DfT Rescue Shield is the highest national accolade, awarded to coastguard teams which have performed the most outstanding rescue of the year. It's the sixth time that Shetland-based teams have been awarded the shield.

On the evening of 9 May 2018, in Shetland a teenager was trapped at the base of a 120ft cliff for two hours with the tide coming in. The rescue was challenging and its success was due to the professionalism

and teamwork of all involved in a rescue co-ordinated by HM Coastguard. Coastguard rescue teams navigated difficult terrain in appalling conditions on the narrow headland, setting up cliff rescue equipment before one of the team descended the cliff, enduring storm force winds, rain and heavy squalls from the incoming tide to safely recover the casualty to the top of the cliff.

Meanwhile a Beech Super King Air 200 fixed wing aircraft G-HMGA has been noted flying UK Coastguard missions in recent weeks. The 1980 airframe was N225SE until it arrived on the UK register in May. Although the aircraft is registered ACH London Ltd it was noted as a corporate white tail with 2Excel Aviation at Doncaster Sheffield Airport in August this year.

Since that time it has clearly been much modified and role equipped and flying coastal missions along the English Channel from Doncaster. [Finningley Gallery/Flight24]



**ROYAL AIR FORCE:** The UK Ministry of Defence is investing £3 billion in nine Boeing Poseidon MRA1, state of the art twin-engine reconnaissance jets which will enhance the UK's tracking of hostile maritime targets, protect the British continuous at-sea nuclear deterrent and play a central role in NATO missions across the North Atlantic. Following an unveiling ceremony in Seattle, Washington the aircraft was flown across the USA to Naval Air Station Jacksonville in Florida where RAF personnel are being trained to operate the aircraft.



# CRIMINALS BEWARE. YOU HAVE MET YOUR MATCH.

# Airborne law enforcement missions have evolved. So has our technology.

Threats are evolving. Missions are longer, more complex and need to be executed faster. More is expected of you and your crew each and every time you fly. L3Harris' technology is evolving to meet these threats. Delivering robust performance and ease-of-use, these newly launched mission-critical technologies within WESCAM MX™ airborne systems enables operators to see more, operate easier and analyze with confidence. Evolving threats around the world have met their match.



After years without any MR aircraft the Poseidon marks a superb but long overdue upgrade in the UK's ability to conduct anti-submarine operations. This will give the UK the renewed ability to conduct long range patrols and integrate with NATO allies.

The RAF lost the ability to fly effective missions when the older BAE Nimrod was withdrawn from service and the replacement cancelled. To maintain the skills required to deliver this vital capability, the RAF embedded aircrew within MPA squadrons in Australia, Canada, New Zealand and the USA during the period when the RAF had no assets of its own.

The first aircraft will arrive in Scotland in early 2020, with the fleet to be based at RAF Lossiemouth in Moray. All nine aircraft will be delivered to 120 Squadron by November 2021. 201 Squadron will also join the programme in due course.

## INDUSTRY

**Life Flight Network** has signed a purchase agreement for four Bell 429s and four Bell 407GXis to add to its existing Helicopter Emergency Medical Services (HEMS) aircraft fleet.

Life Flight Network will use the helicopters to provide critical care transportation to those in need. The company is the nation's largest nonprofit air medical transport service with 31 bases throughout the Pacific Northwest and Intermountain West. For more than 41 years, Life Flight Network has provided ICU-level care to patients in need of emergency medical transport, and support to hospitals, local police, EMS, fire departments, and emergency responders to help ensure patients receive the highest quality care.

Early in November Outerlink shared the **Metro Aviation** booth space at the Air Medical Transport Conference (AMTC) organized by Association of Air Medical Services (AAMS) at Georgia World Congress Center, Atlanta. Given the rapidly growing choices in today's smart device environment, the Outerlink team has developed a web-based system to automate and simplify the process of collecting and understanding aircraft data. Outerlink recently launched a cloud-based flight analytics system for its IRIS platform, a com-

bined voice, video and flight data monitoring system.

The cloud service, which is now available to new and existing customers, provides IRIS users access to critical fleet data from a virtual workspace. The system organizes pre-defined events in easily digestible formats, allowing operators and safety managers the ability to laser focus on the most important data points. That data can then be used to identify trends and training opportunities, which ultimately leads to safer operations. The cloud offers more flexibility and scalability to users on a system already designed to adapt to industry changes. Those users span various sectors including, EMS, offshore, and utility. Since AMTC 2018, Outerlink sold and installed 77 systems, outfitting 100 percent of Metro Aviation's fleet with

IRIS. As a result, Metro's operations have seen measured



benefits to flight operations and exponential gains in reliability. Air medical programs like Phoenix HeliFlight, Avera McKennan and Boston Medflight also utilize IRIS to improve fleet operations. Outerlink demonstrates these operational improvements in its latest IRIS promotional video with Metro.

The IRIS system holds Supplemental Type Certificates (STC's) for many airframes on an international scale. Worldwide, IRIS boasts over 300 units sold with operational customers not only in the US, but in countries such as Australia and Africa.

In January 2017 **Gama Aviation (Engineering) Ltd.**, were awarded a 3-year contract (with an extension option of a further 2 years) for the provision of fixed-wing aircraft maintenance, continuing airworthiness and spare parts for the UK police' new Vulcanair P68R fleet.

The contract covers the maintenance of four aircraft including daily flight inspections, line maintenance, scheduled maintenance, and the supply of aircraft and mission equipment parts for what was then expected to be an all weather, day & night, mission aircraft.

Now nearly two years later we know better. With just one year left of its initial contract it will be interesting to learn many things including how much wasted time and funding Gama have invested into this project. The public service contract will of course be 'Commercial Confidential' but the past two years will have been set up on the assumption that the Gama engineers will have had their hands full supporting four air-

frames operating at least 1,000 hours a year. The actuality is that for most of the time the aircraft were not even present, let alone certified to undertake the missions, across England and Wales requiring a high level of operational availability.

At the start of last month **Bristow Group Inc.** announced that it has emerged from Chapter 11 bankruptcy protection, successfully completing its debt restructuring process and implementing the Chapter 11 reorganisation plan.

In late October Shephard Media and **HMG Aerospace** announced the purchase by the latter of the Shephard rotorcraft civil aviation portfolio, incorporating RotorHub print magazine and digital media channels, as well as associated products including the Civil and Parapublic Helicopter Handbook.

The contract was signed by Shephard Media CEO, Darren Lake, and HMG Aerospace managing director, Mark Howells.

The two companies are working together to ensure a smooth transition of operations, with Shephard Media providing short-term assistance in areas such as website hosting, circulation and data transfer. There will be editorial changes—for instance Helen Haxell the Air Editor has now gone to work for Leonardo in Yeovil.

HMG Aerospace is a publisher, event organiser and intelligence provider serving the international aerospace community. The company continues to grow rapidly with media titles spanning over 35 years within the aviation sector. The HMG Aerospace team comprises journalists and experts connected to industry leaders around the globe, offering coverage on the latest developments in their respective markets. www.hmgaerospace.com

A charity for UK disasters that is backed by the Duke and Duchess of Cambridge will give the public a single donation point that they can trust in the wake of any future tragedies.

The **National Emergencies Trust** (NET) has been launched in response to a string of domestic disasters in 2017 including the Manchester and London terror attacks and the Grenfell Tower fire, which resulted in the need for a "more efficient" and "collaborative" singular charity.

In October it was revealed that sixteen criminals who posed as people affected by the inferno which killed 72 people falsely claimed a total of £775,000 from the Grenfell victims' fund with police only recovering £24,000.

The NET said that multiple appeals following a domestic incident can leave the public feeling overwhelmed

A survey of 2,115 UK adults by the trust found that over half (56 per cent) would like the ability to donate to a single umbrella organisation, with 47 per cent stating this would make them more likely to donate.

Coinciding with the Vertical Lift event in the **UK L3Harris Technologies** announced that it has been selected to provide 40 WESCAM MX-15 electro-optical, infrared (EO/IR) imaging systems by the UK Ministry of Defence – reinforcing the MX-15's proven mission capability and superior reliability. The award also includes comprehensive in-service support and training, as well as an option to purchase an additional 40 MX-15s. Delivery of the MX-15s and associated support services is expected to be completed by 2024.



More than 2,500 WESCAM MX-15s have been delivered to customers worldwide. This award comes after a detailed competitive process culminating in an operational flight evaluation including more than six weeks of flight testing on both fixed- and rotary-wing platforms.

Safran Helicopter Engines has received EASA type certification for its Ardiden 1U engine, installed in India's LUH (Light Utility Helicopter). LUH is a new three-ton, single-engine, multi-purpose rotorcraft designed by Hindustan Aeronautics Ltd. (HAL) which made its maiden flight in September 2016. Since its first ground test in 2015, the Ardiden 1U maturation and certification campaign has accumulated around 1000 of hours of operation, in test beds or in flight, confirming the high reliability and performances inherited from the previous variant.



In the frame of maintenance program improvements for its light single Helicopters range, **Airbus Helicopters** proposes a new solution reducing customer's maintenance costs, while improving reliability. Through a service bulletin applicable to AS350 B2/B3 and prior versions, Airbus Helicopters provides a

• Replacing the aluminum lines with stainless steel ones to prevent any corrosion on the lines

solution which is preventing corrosion of the heating and demisting lines by:

• Installing protective sheaths on the line connections to prevent any condensation, installation already used on H125/H130 aircraft.

Customers will benefit from an improved reliability and a lighter S inspection at 150FH // 1 year for the heating and demisting system, while reducing its workload of 4 man hours.

Airbus Helicopters is proposing on H145 a new solution to prevent loose screws in the door locking mechanism, while improving its robustness and reliability. This upgrade solution, based on a new design of the outer door handle, effective for both pilot and sliding doors, consists of the use of additional flange bushings, Teflon washers and shims combined together with the different screw types, and the assembly of the parts with a stronger Loctite.

The modification can be performed by customers or by Airbus, it requires 20 Man hours for removal of the doors, installation of the upgrade and reassembly of the doors.

This upgrade is applicable on BK117 C-2 and D-2 aircraft types, and as a standard for new H145 aircraft produced from now on.

Austria's Ministry of the Interior (BMI) has formally introduced into service two Airbus H125 helicopters with the **TrakkaBeam** A800 searchlight.

The aircraft joins BMI's existing fleets of Airbus H135 and AS350 helicopters and will operate from Innsbruck and Salzburg on behalf of the Tyrolean Government in the Tyrol and other mountainous areas of Austria.

The TrakkaBeam A800's unique optical design utilizes lamp technology requiring half the power of traditional searchlights to deliver a more intense and consistent beam where needed. The precision design of the optical elements in relation to the lamp's arc source is responsible for the effective collimation and reduction of stray light. This design eliminates the black hole in the wide field of view and the bright spot generated in the centre of the narrow field of view previously experienced in conventional mirror-reflector searchlights, while providing an even beam with energy all the way to the edges, resulting in far less lost targets.

The A800 system has been rigorously tested and certified to DO-160F standards by internationally recognised laboratories in the United States, Germany and Australia, and has been qualified by all major helicopter OEM's. The A800 offers the highest proven MTBF (Mean time between failures) in the industry, which coupled with Trakka's comprehensive warranty, delivers overall lowest life cycle cost for the user making it the most cost-effective searchlight package available.



### SINGAPORE AIRSHOW 2020



**Precision Aviation Group**, Inc. (PAG), a provider of products and value-added services to the worldwide aerospace and defence industry has received an award from Airbus Helicopters Inc. (AHI) for achieving 100% On-Target Quality Performance, recognising the company's performance in support of Airbus Helicopters' AS350, UH-72A, EC-135 and EC-145 platforms.

The award was presented in Grand Prairie, Texas during the Airbus Helicopters North America Supplier Conference and was based on the qualitative and quantitative measures in key areas such as quality, performance and on-time deliveries which are monitored by AHI.

PAG services to aerospace are undertaken from ten locations, nine Repair Stations and more than 280,000-square-feet of sales and service facilities in the United States, Canada, Australia, Singapore and Brazil. PAG subsidiaries have MRO capabilities on over 25,000 products, including accessories, avionics, dynamic components, fuel accessories, hydraulics, instruments, starter/generators, wheels/brakes, and flat panel displays (www.precisionaviationgroup.com).

Avionics innovator and digital technology provider **Becker Avionics** has received STC approval for the Company's BXT6513 ADS-B transponder, designed specifically for the Special Mission & Law Enforcement ADS-B retrofit market.



Heli-One/Norway developed the EASA approved ADS-B out STC on the Super Puma helicopter of Bundespolizei (German Federal Police). This solution provides police and other special mission owners a complete and customized way to equip with ADS-B out for the upcoming June 2020 mandate in Europe. The new feature of the BXT6513 transponder is "sCloaking", a special tactical feature to fly covert missions, while keeping the maximum level of safety.

Meeker Aviation Services Ltd., the manufacturer and supplier of Special Operations Equipment based in British Columbia, Canada and California, USA has announced that Meeker-Airfilm have received an EASA STC for its Airbus Helicopters EC130B4 / T2 single pole mount. The AFM-130 Nose Mount is rated for payloads up to 135lbs and can accept all the most popular camera / sensors/ searchlights/ LIDAR, etc. Details from <a href="meekeravi-ation@yahoo.com">meekeravi-ation@yahoo.com</a>

I seems that, like others before them, the Russians have become somewhat exasperated with Indian procurement. At the Dubai Air Show the head of **Russian Helicopters** said that India was delaying the signing of a firm agreement for purchasing 140 helicopters despite providing all information.

@Meeker Aviation

After several false starts when India looked likely to purchase French AS350 helicopters to replace a fleet of 1950s Sud Alouette based helicopters India and Russia signed a deal in 2015 to acquire 140 KA 226T

helicopters.

Despite, as the Russian's say, having done significant work and providing all information to India's ministry of defence, unfortunately there is no efficient and quick way from the Indian side ...."We can't understand the reasons for the delay."

Perhaps those words from the east will provide a little comfort to both Airbus Helicopters and Leonardo. Another source suggests that part of the current problem is that having done the original deal the Indian's have belatedly decided that they want 'more' – they wish to increase the local content of the aircraft built in India.

In Dubai Russian Helicopters were marketing the Mi -38 and launched the new VRT-500 helicopter, with the first flight scheduled for 2021.

The Pratt & Whitney PW207V engine has been selected to power the new VRT500 light, single-engine civil helicopter designed by VR-Technologies LLC (part of Russian Helicopters).

Since it was introduced in the 1990s the PW200 engine family has been a highly successful programme that has come to power several of the light, twinengine helicopters around the world. Having flown more than 12 million hours, it has earned a reputation for exceptional reliability, with mission availability rates that exceed industry benchmarks.

Russian Helicopters and Pratt & Whitney have worked together for many years on the Ansat helicopter engine and have delivered more than 70 rotorcraft that currently operate in Russia and are entering the international market.



US general aviation company **Beechcraft** announced on 17 November that it has developed a new nose option for its King Air 350 family of aircraft.

The new nose can be utilised for additional cargo space for civilian operators, oxygen bottles, and medical equipment for air ambulance operations, or cameras and sensor systems for airborne surveillance and special mission aircraft.

The extended nose option can be installed new or as a retrofit on a variety of Beechcraft King Air 350 aircraft. (Textron)

The Federal Aviation Administration (FAA) certified nose adds an additional capacity of 12 ft<sup>3</sup> for up to 250 lb (113.4 kg) in additional payload.

"This modification is a response to customer interest in optimising the flexibility of our King Air 350 platform and increasing loading configurations," said Bob Gibbs, vice president, Defence & Special Missions Sales.

According to a Beechcraft spokesperson, the new modification has already been delivered to one customer, with interest from the United States and international customers.



**DART Aerospace** has recently received EASA validation of its Bell 505 standard and float Skidtubes, alongside its existing TCCA, FAA and Mexican DGAC approvals. These skidtubes complement the Bell 505 Emergency Float System, which was launched close to 2 years ago.

Constructed with patented I-Beam technology and shipped standard in a glossy black coating, the DART 505 float skidtubes come with standard tungsten carbide-welded wearplates. Thanks to the central I-Beam web, these skidtubes are ten times more resistant to crushing than the competing product. These skids are also compatible with OEM crosstubes.



**Key Survival Equipment**, based in Derby have secured a support contract for helmets with the UK National Police Air Service. NPAS and other emergency services operators in the UK tend to use the Helmets Limited Alpha and Alpha Eagle helmets but the recent acquisition by US company Gentex will tend to blur those preferences in the future.

The Key can offer maintenance training on helmets or undertake the upkeep of the helmets directly. During the summer Specialist Aviation Services in Staverton Keys ran a two-day Alpha Eagle and Alpha 900 helmet maintainers course on behalf of Alpha helmet manufacturer Gentex giving the S.A.S technicians the skills needed to maintain their customers Gentex Alpha Helmets.



The Alpha helmets were already selling in the USA before the local preference **Gentex** moved in to pick up the UK factory. We can expect the clear demarcation in styles between the two helmets to blur in the future when the next generation helmets move into the market place.

New generation helmets will be more modular and personalised to the wearer with interchangeable clip on capability modules. The expectation is that the helmet shell will be unique to the wearer but the modular design will allow the wearer to upgrade the capability of the outer helmet shell to accept new technology without the need to replace the whole helmet.

The AB initio pilot can acquire a relatively clean personalised shell with basic visors and add additional visors and NVG attachments as their personal skillsets require. In time this ability to produce a properly fitting accessory may facilitate the development of an economic 'helmet pointing' solution for the emergency services. For the moment the very high costs associated with this technology ensures that they remain very much in the realms of the military.

# **ACCIDENTS AND INCIDENTS**

31 October 2019 Airbus Helicopters H225 Air Ambulance of the National 119 Rescue Headquarters (South Korean fire department) carrying seven people crashed into the sea off the disputed islets of Dokdo, Sea of Japan shortly after take-off. Islands disputed with Japan (called Takeshima in Japan and Dokdo in South Korea). The 2016 in-service helicopter had picked up an injured crab fisherman (a severed thumb) and taking to hospital on the South Korean mainland city of Daegu. On board were two pilots, three fire department responders, the patient and a friend. Divers found the wreckage sitting upside down on the sea bed at a depth of 72m and 600m south of the islets. [YonhapNA/DPA]



South Korean Navy's Cheonghaejin submarine rescue ship during searches for victims of the national fire agency's crashed helicopter on waters near Dokdo Island. Courtesy of Korea Coast Guard

**2 November 2019 Mil Mi-17 Hip 5Y-SFA** Kenya Police Air Support. A police helicopter arriving at the Wilson Airport from Liboi in Garissa County, Kenya, crash-landed metres from the runway after an undisclosed 'mechanical glitch' as it came into land. [Kahawatungu]

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**13 November 2019 Bell 214B-1 P2-MLJ** Fire-fighting McDermott Aviation/Helilift '404'A water-bombing helicopter has crashed on a road as it battled bushfires in Queensland's Darling Downs, Pechey, west of Brisbane, Queensland. The helicopter went down off Grapetree Rd, while carrying out water-bombing operations at the Pechey fire. The airframe came down largely intact with the MRB and tail boom detached. There was no fire.

**16 November 2019 Agusta 109E N901EM**. Air Ambulance of LifeFlight A mechanical issue in a main rotor blade caused a LifeFlight helicopter to make an emergency landing in a field in Penobscot, Maine, USA while en-route to Bangor, Maine. On board the helicopter were three crew members and a patient. No one was injured and there was no damage to the aircraft. A team from SevenBar Aviation, the company that operates LifeFlight's aviation services and provides its pilots and mechanics, completed an initial evaluation onsite and secured the aircraft. [WABI]

**21 November 2019 Bell Huey**. A helicopter in the service of the National Anti-Drug Secretariat (Senad) fell on part of the facilities of a factory in Pedro Juan Caballero-Paraguay. It appeared to have a loss of tail rotor effectiveness. Crashed and burned but no casualties reported. The location is next to the property of the anti-drug institution. [Liveleak video]

**24 November 2019 Bell 206L-4 N1821**. Air ambulance of Air Evac Lifeteam made a precautionary landing between Orlinda and Portland, Tennessee. Came down in a field near Dorman Products 5519 US-31W, Portland, TN 37148. [Smokey Barn]

#### **SAFETY**

Although having little in the way of current links to emergency services aviation the newly introduced Piper Aircraft next generation M600 single-engine turboprop brings some interesting technology to the market place, The M600 SLS—standing for safety, luxury, and support— brings to market the Garmin Autoland System which will make it the first GA aircraft in the world to be certified with an Autoland capability. It features Piper's HALO Safety System, which includes autothrottle, Emergency Descent Mode, Enhanced Stability and Protection, Surface Watch, Safe Taxi and Flight Stream connectivity.

The pressurized, six-seat M600 SLS is equipped with Garmin's G3000 avionics suite and powered by the Pratt & Whitney PT6A-42A engine. It has a top cruise speed of 274 knots, range of 1,658 NM and maximum approved altitude of 30,000 feet. Certification should allow deliveries before year end at a price a shade under \$3M.

In a move that looks set to stop in their tracks the plot of half of the aviation related horror movies Garmin claim to be forever changing aviation with its Emergency Autoland system.

The system is the third layer of autonomous automation in the Autonomi suite that's built into the G3000 integrated flight deck.

In an emergency the pilot and passengers can engage Autoland with a single button push (or the system will activate itself if it senses the pilot has ceased functioning). The system selects an airport and runway, flies a precision GPS approach and landing to that runway all while taking into account weather, terrain, obstacles and aircraft performance capabilities.

So that the otherwise powerless passengers don't need to have a degree in aviation the system displays shift into plain English and display simple on-screen visual cues and verbally communicates the intentions even advising how to talk on the radio should they want to, and how to operate the cabin door once the system has the aircraft on the ground and the engine stopped. The automation controls the cabin pressurisation system, the flaps, the landing gear and has automatic braking.

If the aircraft needs additional time to properly commence the instrument approach to landing, Autoland automatically climbs and it can fly a standard holding pattern, while the autothrottle manages speed and altitude. Once on the runway, automatic braking is applied and the system tracks the runway centreline while bringing the aircraft to a stop.

Also coming to market with a similar system from Garmin is the Cirrus Vision Jet. With that too a disabled or dead pilot need not result in the airframe and helpless passengers slamming into terra firma. In the case of the Cirrus there is a big red button in the ceiling of the cabin that 'anyone' can reach and activate before sitting back without a care in the world and letting the aircraft land itself at the nearest International Airport. I suspect the screams of the occupants as the tiny craft slots into the wake vortexes of A380 and 737s might overtax the CVR system.

Clearly there must be limitations on where it might put itself down but that is a detail we hope we may not need to worry about.

These systems are not the first of their kind, but they are the most capable. Previous systems require continuous oversight by a trained pilot, and are only meant to assist if the pilot becomes incapacitated. They are though quite a few steps forward from the pre-programmed unmanned aerial taxis that are proposed for the future. Scary stuff though.

#### UNMANNED

Ground-breaking artificial intelligence (AI) technology being developed in Scotland will soon enhance Police Scotland's use of remotely piloted aircraft systems (RPAS) to find missing and vulnerable people.

The technology, thought to be the first of its kind used by police forces in the UK, is a form of machine learning that provides real-time image analysis for identifying humans in rural areas. It has been developed by a consortium of partners comprising of Thales UK, the University of the West of Scotland, CENSIS, a Scottish innovation centre for sensor and imaging systems, and Police Scotland.

With core AI development work complete and trials of the new system already underway, the project team expects the technology to be deployed in searches for missing and vulnerable people in Scotland in the near future.

Computers with very large amounts of data processing power were previously required to run similar technology, rendering it immobile. However, the specifically designed algorithms developed in this trained with hundreds of hours of footage of officers in different clothing, positions, and situations at police premises, the AI scours an image and can locate a person within seconds at a distance of up to 150 metres. The system is twice as fast as other state-of-the-art algorithms and its ability to recognise a human is enhanced the more it is used.

The RPAS is operated by a specially trained officer on the ground, while another officer receives a real-time video feed from the RPAS cameras on a smartphone. The incorporation of the AI technology will help Police Scotland cover large areas of ground in the search for a missing person, reducing the need for lengthy and meticulous checks from teams of officers on the ground.



Although initially being employed in the search for missing and vulnerable people, the technology could potentially be used in a variety of other applications, including monitoring wildlife on land and at sea.

Ed: Police Scotland was established on 1 April 2013 and is responsible for policing across the whole of Scotland, some 28,168 square miles, covering a third of the United Kingdom's landmass with a unique range of urban, rural, island and remote communities. In terms of staff it is the second largest force in the UK after the Metropolitan Police with a workforce of 23,000 officers and staff working together for the people of Scotland. It operates a single helicopter based in Glasgow in the west.

Although the constituent pre-2013 forces have trialed drones before Police Scotland's two state of the art Remotely Piloted Aircraft Systems (RPAS) only became operational in Aberdeen and Inverness on 1 May 2019.

Drones could become a major network security threat from 2020, forcing organisation to guard the air-space around their buildings, security researchers have warned.

Small unmanned aerial vehicles (UAVs) will increasingly evolve from novelty items to "ubiquitous business tools" over the coming years, explained defence contractor Booz Allen Hamilton in a new 2020 Cyber Threat Trends Outlook report, Infosecurity Magazine reported.

In response, Nigel Stanley, CTO at TUV Rheinland, commented:

Drones are like robots – they seem to make cybersecurity people go weak at the knees and lose a sense of perspective. Of course, remotely piloted aircraft systems (RPAS) could be used to support a cyberattack but quite frankly when many organisations are still struggling with basic email compromises and ransomware they need to be further down the list of things to worry about. The thoughts of empowering staff to jam RPAS signals or otherwise shoot them down is stuff of legal and practical nightmares. Don't go there – worry about your cyber basics first.

In early November UPS and CVS made the first U.S. commercial drone deliveries of medical prescriptions from a CVS pharmacy directly to customers' homes in North Carolina last Friday. Two deliveries—one to a private home and one to a retirement community—were successfully completed using an M2 drone developed by UPS partner Matternet. The autonomous flights were monitored by a remote operator. [AvWeb] Ed: Ultimately, the developed system is designed to deliver drugs etc to the infirm unable to attend the pharmacy. No delivery distance was specified or indicated. A video of the event showed the drone dropping the load onto a lawn well away from a building by line/hoist and flying off. The [young, fit and well] "recipient" walked out from the building to the lawn and retrieved the package.

Netline Communications Technologies Ltd. – an Israeli developer and manufacturer of high-end electronic warfare and spectrum dominance systems for defense and homeland security has launched a new DF component for its DroneNet system.

DroneNet is a comprehensive detecting, identifying, direction finding, locating and jamming solution, designed to prevent unauthorized drones entering secured airspace, such as over strategic facilities, temporary military bases or public appearances of high-profile officials.

The new, MIL STD-compliant DF component adds an additional layer to the multi-layer DroneNet solution. Whilst the deployment of a single DF sensor points the location of a detected drone (both its direction and its elevation), the deployment of multiple DF sensors enables the determination of a precise 3D location. Upon detection of an unauthorized drone, the DroneNet can jam the communication between the drone and its operator on ISM bands, as well as the drone's GPS signal. By disabling the drone's control and telemetry channels, the operator can eliminate the immediate threat. The system is capable of deployment against such as racing drones capable of straight line speeds around 300mph. http://www.netlinetech.com

The DJI stable of drones do not conquer all. Evolve Dynamics a company formed in 2014 operate in the UK and EU and offer their Sky Mantis all-weather UAV/RPAS to police forces. Several are operated by British police forces.

The Evolve machine offers a one-hour flight time with a payload and an operational all-weather capability in rain and 45mph/72kmh/39knot winds.

The system can utilise a 24 hour flight capability by using a cable that can be detached in flight and still able to offer a further 30 minutes of free flight. Www.evolvedynamics.com





#### **PEOPLE**

Michel Versteeg announced his departure as managing director of AEC Skyline Holding B.V., effective November 1. Michel is now the manager at JetSupport Amsterdam. His interests and affairs in AEC Skyline will be represented by Group CEO Stef Have.

The general spokesperson at AEC Skyline will be Stef Have, Tel. 0031 +(0)76 700 20 60 <a href="mailto:s.have@forum-group.nl">s.have@forum-group.nl</a> . If you have a request for information regarding flight operations, you can contact Kim Olde Bijvank Tel. +31 +(0)6 54 75 89 39 <a href="mailto:k.oldebijvank@aec-skyline.com">k.oldebijvank@aec-skyline.com</a> . For projects and agencies, you can contact Patrick de Jong, Ground operations manager Tel. +31 +(0)6 29 55 65 22. This move may have the effect of reducing the status of AEC as a first line sensor operator and representative.

Early last month HAI announced the persons in recipient of its annual awards. These will be presented at the Salute to Excellence Awards luncheon during HAI Heli-Expo 2020 held at the Anaheim Convention Center in Anaheim, California on January 29. The group recipients are listed elsewhere in PAN, the following are listed as individual winners. *Images via HAI*.

**Jason Glynn**, a pilot for Era Helicopters in Houma, Louisiana, is the recipient of the association's Pilot of the Year Award.

Glynn's career includes having served as a flight instructor for Vortex Helicopters in Mississippi, followed by roles at Era Helicopters. Through 16 years at Era, Glynn moved through the ranks of instrument flight rated second-in-command to visual flight rated captain to IFR captain. His work ethic, dedication to aviation safety, and strong desire for positive industry change inevitably drew him into a management role at the company. He is currently director of operations.

The Excellence in Helicopter Maintenance Award goes to **Corey Brekke**, maintenance manager in Afghanistan for Columbia Helicopters.

Brekke began his aviation career in Montana, where he obtained his A&P license in the winter of 1991. Subsequently, he worked for eight years in the South Pacific on a 350-foot tuna boat, where he was the only aircraft mechanic onboard, maintaining a Hughes 500.

In the spring of 2000, Brekke accepted a job with Columbia Helicopters. After only five days on the job, he



departed to work in Alaska as the fourth man on a logging crew working on a Columbia Model 107-II Vertol.

In 2011, Columbia received a contract to support Operation Enduring Freedom in Afghanistan, delivering four Vertol 107-IIs and a 234 Chinook. Brekke had started working as senior crew chief on the contract but was promoted to Afghanistan maintenance supervisor in 2018.

The new role required him to focus heavily on managing maintenance resources to support the 12 aircraft undertaking military's missions. Instead of using traditional small maintenance teams assigned to specific aircraft, Brekke transitioned the teams to shift work resembling that of an airline to support daily flight operations and maintain an operational readiness rate of at least 90%.



**Krisna Dewi**, commercial manager of PT. Sayap Garuda Indah (Heli SGI and Air Bali) in Bali, Indonesia, is the 2020 recipient of the association's Safety Award. The award, sponsored by <u>BLR Aerospace</u>, acknowledges outstanding contributions in the promotion of safety and safety awareness throughout the international helicopter community.

Dewi is receiving the Safety Award in recognition of her promotion of a business model that places safety above all other business elements, including profit. Her unwavering advocacy and determination to prioritize safety in the company's operations has also resulted in increased business for her company during a period when Indonesia's helicopter industry has experienced low or negative growth.

In an administrative role when Heli SGI's reorganization began, Dewi was quickly promoted to commercial manager, the second-highest position in the company. As a woman with no aviation background in an industry dominated by experienced men, Dewi found she bore not only the responsibility of reviving the business but also the task of earning her colleagues' respect.



**Mark Ogden**, editor of New Zealand based*HeliOps* magazine, is the 2020 winner of the association's Salute to Excellence Lightspeed Aviation Excellence in Communications Award. The award recognises the individual or organization achieving the most creative and distinct dissemination of information about the helicopter industry. Ogden has been editor of the *HeliOps* (civil helicopters), *HeliOps Frontline* (military helicopters), and *Air Attack* (aerial firefighting) magazines for the New Zealand–based Kia Kaha Media Group for the past 20 years. Ogden, who never shies away from highlighting issues that affect the global rotorcraft industry, is known for his highly respected, hard-hitting editorials, which provide focused analysis of the industry in each issue of all three magazines.



**Dwayne Williams**, a retired chief pilot for both Bell and MD Helicopters, is the 2020 recipient of the association's W.A. "Dub" Blessing Flight Instructor of the Year Award. The award, sponsored by H. Ross Perot and the Perot family, recognises superlative contributions by a helicopter flight instructor in upholding high standards of excellence.

Williams has the unique distinction of having received five separate nominations this year for the Flight Instructor award, with each nomination coming from a previous recipient of the award.

Williams began his flying career in the U.S. Army in 1965 and having served in Vietnam from 1966 to 1967. After his military service he flew for Petroleum Helicopters, Inc. in the Gulf of Mexico.

In 1974, he joined Bell Helicopter International as a standardisation and instructor pilot training Iranian Army pilots. He became the chief pilot for the flight programme

in Iran until 1979.

Upon returning to the US he served as a test pilot with Bell, moved on to the Experimental Test Pilot division and rose to become the chief pilot until he retired from Bell in 2005.

In 2006 he accepted the chief pilot's position at MD Helicopters, Inc. in Arizona, where, until 2012, he directed the production and delivery of helicopters as well as pilot training.

Most recently he has served as the chief pilot with Aerodynamics in the company's night vision goggles (NVG) programme, acting as the certification pilot and NVG instructor. He has now accrued nearly 16,000 accident-free flight hours over his career, with 3,750 of them as instructor. In 2015, the FAA presented him with its prestigious Wright Brothers Master Pilot award, recognizing his more than 50 years of flight.



**Gary Wiltrout** is the 2020 recipient of the Salute to Excellence Lifetime Achievement Award. This award, presented by Bell, salutes excellence in management and leadership and is given to an individual for long and significant service to the international helicopter community.

Wiltrout has flown helicopters around the world during a 50-plus year career in aviation. He first flew for the U.S. Army, transporting troops in and out of battle in Vietnam in 1968 to 69. Afterward, he served as a flight instructor at Fort Rucker, Alabama

After leaving the army in 1971 with 2,000 accident-free hours, he moved to Alaska and began flying firefighting, pipeline and powerline construction missions whilst

also conducting search-and-rescue missions, aircraft accident investigations and seismographic work. In 1999, Wiltrout became chief pilot for Salmon River Helicopters in Riggins, Idaho, where he worked 20 years before recently retiring. During his career with many different companies, he flew more than 26,500 flight hours in helicopters, more than 20,000 of them while conducting longline, external-load missions.

Lastly and probably the most difficult to edit is news that HAI has announced that the editor, **Bryn Elliott**, is the 2020 recipient of the association's Salute to Excellence Law Enforcement Award. The award, sponsored by MD Helicopters, recognises an individual or organisation that has contributed to the promotion and advancement of helicopters in support of law enforcement activities.

After thirty years as a police officer for the London Metropolitan Police in 1996 Police Aviation Research was established and Police Aviation News created out of some years historical research. The subsequent two decade journey saw the growth of the magazine and the creation of the independent Police Aviation Conference (PAvCon Europe).

Here I will digress from the lengthy official citation for I hope the reader will already know what the magazine means to them.

PAvCon originated in 2006, when the editor was invited to assist in setting up a series of police aviation conferences for publisher and conference organiser Alexander Shephard. After three successful shows, circumstances led to the creation of the independently organised PAvCon in 2009. The rest they say is history.

The primary goal of my work is facilitating the sharing of ideas and resources, an endeavour whose impact on helicopter safety has been significant. As a direct result of the work, notable progress in helicopter safety has been made in such places as Australia, Africa and Europe.

Personalities aside, and it must be stated that PAvCon is simply bringing together many knowledgeable and personable individuals in one place in Europe on an annual basis. It is the attendees that produce the positive outcome. I tend to agree with the HAI citation that public safety aviation across the globe is safer thanks to the research, media, and events that Police Aviation Research provides. One particularly important element of PAvCon is that as a journalist it is a strict tradition that the editor never speaks beyond a brief introductory welcome!

All of these awards will be presented at the Salute to Excellence Awards luncheon during HAI HELI-EXPO 2020. heliexpo.rotor.org.

#### **MOVE ALONG THERE**

Life is about percentages, in the real world, we are told, the will of the people will prevail. Well, thanks to Brexit, we know that is not true. A small majority of the people wanted out of the European Union wanted out and still struggle to realise their aspirations.

Over in northern Spain a similar situation prevails, an apparent majority of the people wanted self government for their region and held elections based on their wishes and their leaders are currently banged up for insurrection. So we know for a fact that the will of the people will not prevail.

Or do we?

In direct contrast it seems that a tiny minority of the people – just 1.6% - have turned sense on its head and moved no less an organisation than the Royal Air Force to meeting their needs.

RAF aircrew who are vegan could soon carry out their duties



with a clear conscience – knowing their uniforms are free of leather or wool. We are talking about one person at the moment but in all there may be a few dozen.

Top brass have been ordered to amend military policy on dress after a landmark request from a helicopter technician who objected to leather safety boots.

Following the test case, any RAF personnel who refuse standard service issue clothing will be provided with vegan boots, shoes, berets, trousers, jumpers and socks where possible. The Army and Royal Navy could be forced to follow suit.

And of course if those non-animal substitutes for the tried and tested clothing for the majority will need to meet all the same safety standards! Woe betide the UK military if some plastic replacement for a pair of safety boots turn out to be melt on the foot.

I bet you do have one of these in your local police set up..... But our hosts for the 2020 PAvCon have them.

The German Federal Police, the Bundespolizei, now have three. FGS Potsdam BP 81 was commissioned on December 14, 2018, followed by the second ship FGS Bamberg (BP 82) on September 18, 2019. This is the vessel of this class being built by Germany's Fassmer Company under a contract from late 2016.

The BP 83 Bad Düben, carrying a crew of 14, had two 12V 26F/4080kW/1000rpm main engines. It has two Caterpillar gensets and two Piening CPP propellers with 2.75 m diameter blades. Potsdam also has unidentified scrubber technology and two transverse thrusters.



The OPVs feature a flight deck that accommodates the Super Puma medium helicopter and has enough storage space for five mission containers. They can also launch and recover two interceptor boats. It has a length of 86.2 m and a width of 13.4 m.

The main armament of the Potsdam-class OPV consists of one Bofors 57 Mk3 from the Company BAE Systems. The gun is mounted at the front deck. The Bofors 57 Mk3 is a versatile naval gun with firepower and range that exceeds expectations when compared with similar, medium calibre naval gun systems. The BAE Systems contract also included accompanying fire control systems as well as systems integration support.

#### EVENT REPORTS

Occasionally the diary gets a bit crowded and it becomes difficult to go where you might like. Events are either overlapping or so close that flying between them becomes either unwise or impossible. In the past there have been near misses with both the US based Heli-Expo and the Singapore Air Show and the US based ALEA [now APSCON] and the UK Farnborough Air Show.

In 2020 APSCON is in Houston, Texas and it starts on the same day in July as the slightly curtailed Farnborough event. Both run 20-24 July. Decisions will have to be made.

Many of you may have already read the Special Report published last month by PAN on the revamped Helitech and the Commercial UAV Show. The document is on the web site. Please note that I got confused on a couple of occasions whether the Farnborough event was called Vertical Lift or Vertical Flight!





Another important UK conference and exhibition last month was the Association of Air Ambulances (AAA) National Conference on November 18 at the Chelsea Harbour Hotel, London.

The event is a mainly medical conference backed up by a significant 'table top' exhibition of vendors who provide much of the income for the event. Their presence is mainly supportive, they do not have a high expectation of meeting purchasers, engineers and pilots at an event such as this.

Organised by the AAA as a commercial event it is a gathering of many to laude a few. They, charity, operational and clinical speakers, come together to talk on contemporary topics within the air ambulance and ambulance service sectors

Like the free conferences held by individual HEMS charities this event is focussed on an audience of doctors and medical practitioners in talking about the core business of UK air ambulances – getting the doctor to the patient and saving life using medical wizardry. It is emergency medicine in demanding, remote environments with limited resources.

The programme inevitably included elements on fundraising and management as well as meeting the often-exacting standards of the Care Quality Commission. These meetings tend to attract the attendance of the most highly remunerated staff members of the charities rather than the coal face workers.

This year an oft repeated theme is mental health with a few aspects of this 'in' subject being addressed in the day conference. The link with day-to-day HEMS work might be a little tenuous though.

There are heady, and equally 'super' subjects on Social Change and 'Disaster Management' from Oxfam [well they might know, they have had to deal with their own in-house disasters]. That Oxfam thread aims to meet a desire ensuring that every supporter knows the impact of their donation – all with a background focus on financial and safeguarding standards.

What is clear is that there are apparently no bread and butter subjects aimed at the fundraising volunteers, the pilots or the engineers. It would be difficult to see how such mere mortals would finance attendance at such a heady event - unless of course they were up for consideration as pilot/engineer/unpaid fundraiser of the year. There is more than a hint of elitism in this event and perhaps some feel that holding it in some crummy but easily accessible hotel outside London is beneath them.

How all this comes together is steeped in mystery though and adds a different aspect on ensuring that every supporter knows the impact of their donation. The conference is open to all members and non-members – at a price. The Air Ambulance Awards of Excellence and Gala Dinner that followed that evening is also open to those who pay.

It may not be The Ritz but the venue for the Conference and Awards is no third rate hotel in the middle of nowhere – how many times can the AAA call it prestigious? How many of those attending can even afford to get there is also glossed over – would be conference attendees are faced with charges ranging from £120 to £160 with the added cost of the black tie meal adding at least £40 to that. They are modest rates for a pay event but where does the mon-



ey come from?

To that you need to add the overnight accommodation and travel. Anyone staying for the conference and the Gala Dinner needs to be well heeled [or well sponsored] as the rooms, although reasonable at £225 pp a night require double payment for single occupancy, so the on-site price hovers around £450 a night for two nights. There are cheaper hotels not too far away but even the humbler Ibis charges £160 a night, breakfast is probably a significant extra and so are the taxi cabs.

Some attendees will be able and willing to fork out the minimum of £500 two nights in the Ibis requires but some, and they will be the speakers, the award winners, their friends and others, look like costing *someone* at least double that without travel costs. As this is clearly charity money any desire for 'ensuring that every supporter knows the impact of their donation' is courting criticism.

I assume that the individual charity pays all for their executive team and their nominated prize winners, somehow the AAA pay for the speakers. Someone is paying travel, hotel and entry fees and not many will be raiding their personal bank accounts. I would be surprised if most attending charities are not allotting several thousands of pounds to the overall day trip.

So, in financial terms, the event is not perfect but it is a niche event with significant support – those two dozen 'sponsors' including, Airbus, Bell, BMW, Capital Air Ambulance, FEC Heliports, Gama, Gentex, Leonardo, Phillips, Safran, SAS, Sloane and Zoll include the names missing from the recent Vertical Lift event at Farnborough.

You only have to contrast that event with the negativity currently surrounding the former Helitech to draw your own conclusions.

The evening event was glittering meal followed by the National Air Ambulance Awards of Excellence presentation of awards – the AAA website will have a full list – but suffice to note that the recently featured Haynes HEMS book took an award.

Dorset and Somerset Air Ambulance came out winners in two categories this year. The charity was shortlisted as a finalist in three categories; Outstanding Young Person of the Year, Air Ambulance Campaign of the Year and the Air Ambulance Special Incident Award.

They took the award for Campaign of the Year - Haynes Air Ambulance Manual currently on sale and is proving a big success. This book was a joint project between Haynes Publishing and Dorset and Somerset Air Ambulance. It was written by Claire Robinson with extensive time, input and the full co-operation of the Charity.

Haynes' initial thoughts were that the book should solely be about Dorset and Somerset Air Ambulance but the end product included a detailed insight into the work of air ambulances across the UK.

Haynes Publishing are donating 75p from every copy sold to Air Ambulances UK in support of all 21 air ambulance charities across the UK.

Campaign of the Year – Left to right: Award Sponsor Ged Jones (CEO of Lottery Fundraising Services), Tracy Bartram (DSAA Communications Manager), Bill Sivewright (DSAA CEO), Charlotte Hawkins (Awards host star of Good Morning Britain).



**AMBULANCE** 

ENSON BUTTON AR AMBULANCES UK



There are two publications hot on the heels of *Police Aviation News*! Both follow the path of PAN in being available on-line but they also offer more hard copies and are effectively less free in that they offer free copies but generally charge. Long standing Ontario, Canada based magazine Vertical 911 has now been rebranded *Vertical Valor*, and apparently will be offering a similar mix of law enforcement stories to the earlier title.

Wholly new comes *Air Support* from the Auckland, New Zealand based HeliOps team. The publishers of their newest publication say it covers the world of airborne law enforcement aviation. The first issue includes news items and articles on Norwegian Police's brand new AW169s; Flying with the Palm Beach Sheriff; Cross Border Smuggling in Europe; Inside Russia's FSB; Autorotations and more..... The magazine is being offered for inspection at <a href="https://www.heliopsmag.com/current-issues">https://www.heliopsmag.com/current-issues</a>

#### COMING SOON

3-4 December 2019 International Security Expo at Olympia. Operated by Nineteen Group, Tuition House, 27-37 St Georges Road Wimbledon, London, SW19 4EU www.internationalsecurityexpo.co.uk



The APSA Rescue Summit 2020 will be held in conjunction with **HELI-EXPO 2020 on Monday, January 27**, at the Anaheim Convention Center - Room 210AB, 200 South Anaheim Boulevard, Anaheim, CA 92805 Rescue Summit 2020 will include various presentations pertaining to helicopter rescue operations including topics such as hoisting, safety and critical incident & accident reviews. Lunch will be provided and networking opportunities are scheduled throughout the day. Registration Cost:

Member: Complimentary (Included in APSA Individual Membership) Non-

Member: \$50

28-30 January 2020 HAI Heli-Expo, Anaheim, California www.rotor.org





And finally.... An image from this year's Dubai Air Show of a local police helicopter on display.

