

MAGAZINE

ROTOR

THE WORLD OF HELICOPTERS BY AIRBUS HELICOPTERS - N°97 - FEBRUARY 2014

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SETTING OUR SIGHTS EVEN HIGHER!

2014 will be remembered as a defining moment for our company as we embark on a new chapter in our history. After more than two decades of sustained growth that has propelled us to the top of the helicopter market, Eurocopter has now become Airbus Helicopters. This new name comes with new ambitions, inspired by the values and excellence of the Airbus Group. These goals are a direct extension of my top priorities for our company: customer satisfaction, quality, safety and competitiveness. It's a challenge we are absolutely determined to meet.

Our expertise and the new technologies we develop remain squarely focused on ensuring your safety and the safety of your passengers. The new generation of helicopters we are developing will take flight safety a step further by offering high-performance human-machine interfaces and more advanced automation and system integration.

Customer satisfaction is also a priority, and Airbus Helicopters is committed to continuously improving helicopter reliability and availability. We are introducing sweeping changes in this area and speeding up our response times.

Quality is at the heart of our transformation and will be strengthened by the introduction of group-wide standards for production processes and tools.

We are also revamping our industrial chain — from development and production through to customer support — in order to reduce lead times and production costs.

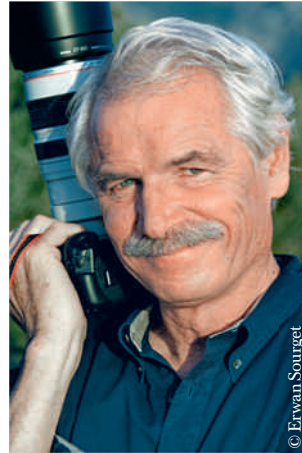
Valued customers, rest assured that the 23,000 men and women at Airbus Helicopters are firmly committed to making this ambitious plan a resounding success.

Guillaume Faury

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Many African countries are now registering double-digit growth as they tap into major oil & gas and mineral resources and continue to develop their agriculture and service sectors. As worldwide energy needs mount, the continent's reserves have become the focus of a great deal of attention. This increase in economic activity has had two important effects: new money is being injected into the continent, and the need for helicopters is growing.

As a result, new markets could very well be opening up in the near future. But political instability remains a problem for many countries, and homeland safety and border protection are still of primary concern. Here, too, the helicopter has a role to play. It has proven to be an indispensable tool for renewing and developing vital public services such as law enforcement, public security, rescue work and air ambulance services.

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Airbus Helicopters offers a wide array of cabin layouts that can be perfectly adapted to its customers' missions.



© Anthony Pecchi/Airbus Helicopters

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© Anthony Pecchi/Airbus Helicopters

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Flying to a Pink Floyd Beat

Pink Floyd drummer Nick Mason visited Airbus Helicopters' Marignane site last July for a demonstration flight in an AS350 B3e Ecureuil.

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India: From on High, Searching for Water Below

An AS350 B3 Ecureuil has been fitted with a 30-meter long probe to discover new sources of underground drinking water in India.



© Eurocopter India

HAVE YOUR SAY!

Dear readers, *Rotor Magazine* wants you to express yourself in the pages of our magazine! Each issue will now include a section for reader's letters. Feel free to drop us a line and share your thoughts about *Rotor Magazine*. And please tell us about your operating experiences, share your stories and send in the best pictures from your missions. Send your letters to rotor-magazine@eurocopter.com. We're counting on you! The new "Readers Corner" section will be included in the next issue of *Rotor Magazine*.

FOR MORE INFORMATION CHECK OUT

ROTOR ONLINE

www.airbushelicopters.com



MedFlight of Ohio and HealthNet Aeromedical Services LEADING AIR MEDICAL SERVICES UPGRADE THEIR FLEETS

Two of the leading air medical transport services in the U.S., both long-time Airbus Helicopters Inc. customers, are upgrading their all-Airbus Helicopters fleets. HealthNet Aeromedical Services, based in Charleston, W.V., took delivery in the fall of both a new EC130 B4 and an EC135. Both helicopters will replace older aircraft in HealthNet's nine-Airbus Helicopters fleet. MedFlight of Ohio based in Columbus, Ohio, plans to take delivery of two new EC130s in early 2014. MedFlight now operates eight leased EC130s. The two air medical services operate in adjoining regions. In early 2013 they jointly put a new EC130 into service in the tri-state border region of Ohio, West Virginia and Kentucky. The shared EC130 has a unique paint scheme: one side is painted in the HealthNet colors and the other side in MedFlight colors.



© HealthNet Aeromedical Services

Germany DELIVERY OF FIRST NH90 TTH IN FINAL OPERATIONAL CONFIGURATION



© Anita Mayer/Airbus Helicopters

On November 14, 2013, Airbus Helicopters delivered the first NH90 TTH⁽¹⁾ in final operational configuration (FOC) to the German Armed Forces. The new configuration includes field-proven avionics with night-flight capabilities, high-performance self-protection, an interoperable communication system for international operations, and next-generation mission equipment.

The German Army deployed four NH90s in Afghanistan for Forward Air Medical missions in April 2013. The helicopters were declared fully operational in June and have been successfully completing their missions ever since.

(1) Tactical Transport Helicopter



Helipartner Thailand 10 ECUREUIL AS350 B3es FOR LEASING ACTIVITIES

In 2013, Helipartner Thailand received its first three of 10 AS350 B3e helicopters ordered in June 2013. These aircraft will meet the ASEAN region's increasing demand for utility aircraft to perform aerial work and natural resource management missions. Deliveries of the remaining seven AS350 B3e helicopters will occur between 2014 and 2015.

Helipartner Thailand was incorporated in 2011 and is a joint venture of Thailand's major offshore helicopter operator, SFS Aviation, and Helipartner Malaysia. After identifying the niche market, they launched their leasing activity with a complete set of solutions based on their operators' experience and capabilities in the support of local operators in their missions.

Bond Helicopters NEW OFFSHORE HELICOPTER SERVICES IN AUSTRALIA

On October 15, 2013, Bond Helicopters Australia Pty Ltd (Bond) celebrated the launch of its new business providing offshore helicopter services to the energy industry in Australia, one of the fastest growing offshore markets in the world.

Earlier in the year, Bond had announced its first major contract in the region, a five-year contract with the PTTEP Australasia Group of Companies (PTTEP), part of Thailand's national petroleum exploration and production company. Bond will initially support PTTEP's Timor Sea operations with three Super Puma AS332L helicopters, until three new EC225s ordered in September are delivered in early 2014.

Peru FIRST EC145 FOR THE NATIONAL POLICE

On November 5 of last year, the Peruvian Interior Ministry received the first of four EC145s ordered at the end of 2012. The formal handover was attended by French Defense Minister Jean-Yves Le Drian, who took the occasion of his official visit to Peru to reiterate the cooperation between France and Peru in matters of defense and security.

The EC145s—the first units of this model to reach Peru—will perform public security missions as well as disaster relief throughout the country.





AIRBUS HELICOPTERS TAKES FLIGHT!

Article
SÉBASTIEN TROTIGNON

Airbus Helicopters is implementing a transformation plan with clear and measurable goals, and the Group's customers will be reaping the benefits.

"The transformation plan introduced by Airbus Helicopters marks a major shift toward a new way of manufacturing and ensuring support for our aircraft," explained Dominique Maudet, Executive Vice President, Global Business and Services, Airbus Helicopters. "It's an area in which the unparalleled know-how of Airbus in designing and manufacturing aircraft will be invaluable."

The new "favorite mission configuration" concept introduced for the Airbus Helicopters range will reduce lead times and optimize cost effectiveness. New service and support initiatives have already been launched. The goal is to

quickly implement improvements that speed up part deliveries, while also reducing turnaround times for customer questions and technical incidents. Meanwhile the logistics chain will be basing its actions on more in-depth knowledge of customer activities in order to better meet their operational needs. The distribution, sales and support network will be reorganized to make sure that all the Group's customers around the globe can count on the highest levels of service in their region.

The first changes are already underway, and momentum will continue to build throughout the coming year.

THE NEW LOGBOOK

- **On the web:**
internet site now available at:
www.airbushelicopters.com
- **To contact us:**
eurocopter.com email addresses remain the same and will be replaced progressively by airbus.com addresses throughout the coming year.
- **Product names:**
there are currently no plans to change helicopter names.

AIRBUS HELICOPTERS: KEY FIGURES

12,000 helicopters in service, operated by 3,000 customers.

497 helicopters delivered in 2013: with a 46 percent share of the civil and parapublic market, nearly one out of every two helicopters sold worldwide bears the Airbus Helicopters logo.

58% Airbus Helicopters revenues: 58 percent helicopter sales, 42 percent service and maintenance.

422 helicopters on order in 2013.

3 million flight hours completed on average each year.



2014. New innovations to improve safety and performance: highlights

- Certification in January of the EC175 by the European Aviation Safety Agency (EASA). The newest helicopter in the Airbus Helicopters range symbolizes a whole new generation of rotorcraft. Fifteen units are currently in production, with initial deliveries scheduled for this year. The EC175 has already set two new vertical speed records: 0 to 6,000 meters in 6 minutes and 54 seconds, and 0 to 3,000 meters in 3 minutes and 10 seconds.



© A. Peedhi/Airbus Helicopters

- Ongoing certification of the EC145 T2, equipped with Helionix avionics. Helionix increases flight safety and paves the way for increased automation in helicopter piloting.



© Laure Gilbert



WATCH A VIDEO OF THE EC145 T2 AT ROTOR ONLINE
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AFRICA: AN EVOLVING MARKET

Article **RÉGIS NOYÉ**

Many African countries are now registering double-digit growth as they tap into major oil & gas and mineral resources and continue to develop their agriculture and service sectors. As worldwide energy needs mount, the continent's reserves have become the focus of a great deal of attention. This increase in economic activity has had two important effects: new money is being injected into the continent, and the need for helicopters is growing. As a result, new markets could very well be opening up in the near future.

But political instability remains a problem for many countries, and

homeland safety and border protection are still of primary concern. Here, too, the helicopter has a role to play. It has proven to be an indispensable tool for renewing and developing vital public services such as law enforcement, public security, rescue work and air ambulance services.

Through its subsidiary ESAL in South Africa, Airbus Helicopters is pursuing its strategy to provide the continent with neighborhood services and build trust with local operators. In this way, Airbus Helicopters is sure to meet the needs of African customers whenever the opportunity presents itself.

© WildDog



Africa covers 30 million square kilometers and is home to 52 different countries, each with its own specific cultural, historical and linguistic characteristics. Tribal social structures remain important in some countries, and security problems often are still an issue.

A LONG-TERM STRATEGY ADAPTED TO EACH MARKET

The African continent has enormous market potential but can be difficult to evaluate. Many different aspects must be taken into account – including the political situation – in order to determine when the market will reach maturity.

AFRICA'S HELICOPTER FLEET

According to estimates, approximately 2,230 helicopters are currently in service in Africa. Airbus Helicopters accounts for approximately 30% of the fleet, making it a leader on the continent. Although observers agree that the fleet is aging, it remains difficult to establish a precise picture of its technical status.



In the civil and parapublic sectors, a long list of transportation and communication needs must be met, often to reach destinations inaccessible by road.

their helicopters – many of which have been on the ground for a long time – and help get them back into the air. We then can propose innovative solutions geared towards their most urgent needs, while taking into account budgetary constraints. These solutions may include leasing options or the sale of previously-owned helicopters, and could pave the way for new helicopter sales later on. Third, we can offer helicopters that are perfectly adapted to customer needs at very competitive prices.” Key selling points will be performance levels (particularly in “hot and high” conditions), multi-mission capabilities, reliability and low operating costs. The EC175 appears to be the perfect choice to spearhead these initiatives.

After years of being relegated to the role of a poor cousin, Africa is now attracting the attention of major manufacturers and equipment suppliers. “The need for services and manufactured goods is huge, even if this has been slow to materialize – in particular for helicopters,” said Loïc Porcheron, Vice President of Sales for Middle East and Africa. Growth potential is judged to be “explosive”, but the markets can open up only if they can count on a steady influx of foreign capital. Needs for both civil and military helicopters are equally high, which explains why many of Airbus Helicopters’ competitors have set their sights on regions in Africa where France’s historical influence is now on the wane.

INNOVATIVE SOLUTIONS

Airbus Helicopters is implementing a three-pronged approach for this market, explained Gérard Franchini, who is head of sales for Africa and Maghreb: “First, we’re developing a policy to increase services in proximity to our customers. We want to get to know them, and better understand their needs. We can also examine

NEIGHBORHOOD SERVICES

Airbus Helicopters’ current activities in Africa are mainly focused on maintenance and training services. The company’s teams often are called on to perform examinations or simply give advice—services that may not generate revenues but are strategically important.

For the past two decades, ESAL has been providing services to approximately 20 countries in southern Africa. The subsidiary is based in Pretoria, but plans on establishing local maintenance branches as part of its strategy to provide more neighborhood services. Western and eastern Africa (Kenya) are prime candidates for new locations. Following Airbus Helicopters’ purchase of Canadian company Vector Aerospace in 2011, ESAL has benefited from engine maintenance shops in South Africa and Kenya. Plans also call for new training centers in the region, with courses in both French and English. Since the start of 2013, a “Field Rep” based in Gabon has been traveling throughout the region, collecting large amounts of information to supplement the data regularly provided by the Group’s dynamic commercial network.

A WIDE VARIETY OF NEEDS

In the military sector, the most often expressed need is by armed forces looking to renew their fleets for law enforcement and to ensure national sovereignty. In the civil and parapublic sectors, infrastructures must be developed to meet a long list of transportation and communication needs. Another important factor is the long distances that must be covered, often to destinations inaccessible by road. These same sectors also have gaping needs in terms of law enforcement, public safety, rescue work and air ambulance missions. The needs are extensive for local industries as well: offshore platform services, exploration work for the mining industry, the monitoring of power grids and pipelines, forest patrols... the list goes on and on.



EUROCOPTER SOUTHERN AFRICA Pty. Ltd (ESAL)

AN IMPORTANT FOOTHOLD FOR AIRBUS HELICOPTERS IN AFRICA

ESAL⁽¹⁾ first set up shop in South Africa in 1994. Working out of its main offices located between Johannesburg and Pretoria, ESAL provides comprehensive services to customers in southern and sub-equatorial Africa.



Fabrice Cagnat, managing director of Eurocopter Southern Africa Pty. Ltd. until late 2013, when he handed over the reins to Arnaud Montalvo.

Eurocopter Southern Africa Pty. Ltd (ESAL) has served as a bridgehead for Airbus Helicopters in Africa, with the subsidiary progressively expanding its area of influence to include the entire Southern African Development Community, representing fifteen countries and a total population of over 250 million people. “We’re Airbus Helicopters’ second largest subsidiary in terms of number of countries served,” said Fabrice Cagnat, ESAL’s managing director until December 2013, “and also the only helicopter manufacturer to have its own subsidiary in the region – further proof of the importance we place on our operators.” ESAL’s primary activity is support services for the Airbus Helicopters fleet in the region: maintenance, spare parts and technical training. “Many of our customers’ bases are located far away, which means we have a large area to cover. We provide on-site services for several helicopters, and these external missions account for up to 720 man-days per year,” he explained. ESAL can provide services for all the products in the Airbus Helicopters range, but is specially qualified for maintenance work on the Ecureuil – in particular the glass cockpit, night vision systems and spotlights. ESAL also provides support to Denel, a local company licensed by Airbus Helicopters to build Pumas for the South African Air Force.

For its commercial activities, ESAL works within a framework clearly defined by Airbus Helicopter’s head office. Gilbert Do Nascimento, the ESAL Sales Director, talked about the company’s role: “ESAL is mainly in charge of the civil and parapublic markets, which have been hit hard by the economic crisis. They represent only about a dozen new aircraft sales a year in this region, but Airbus Helicopters now holds a 65 percent share of these markets – and 100 percent in Kenya, where we sold five new aircraft in 2013.”

(1) The Rebranding of subsidiaries is scheduled for 2014.

ESAL: KEY FIGURES

The ESAL facilities at the Grand Central Airport have 4,300 square meters of floor space, and can accommodate 20 helicopters simultaneously. The company also has set up shops in Cape Town and Nairobi, Kenya, with two technicians on permanent assignment at each site. A total of 85 employees provide services for approximately 250 Airbus Helicopters rotorcraft in their assigned territory.

THE OIL & GAS SECTOR

A CHANGING MARKET

Serving offshore platforms is still one of the most important helicopter activities in Africa. Market observers are predicting “substantial” market growth, but the majority of the operators are still multinationals. Christopher Grainger, Vice President of Sales for the worldwide oil & gas sector for Airbus Helicopters, provides a closer look at this market.



© Airbus Helicopters

| Christopher Grainger

“Africa’s offshore oil & gas reserves are mainly being exploited in the western part of the continent, with activity heavily concentrated in Nigeria and Angola. Smaller operations are also scattered about the region in countries such as Cameroon, the Democratic Republic of the Congo, Gabon, Ghana and Ivory Coast. Countries in North Africa – in particular Algeria and Libya – also have significant oil & gas reserves, but they are mainly land-based

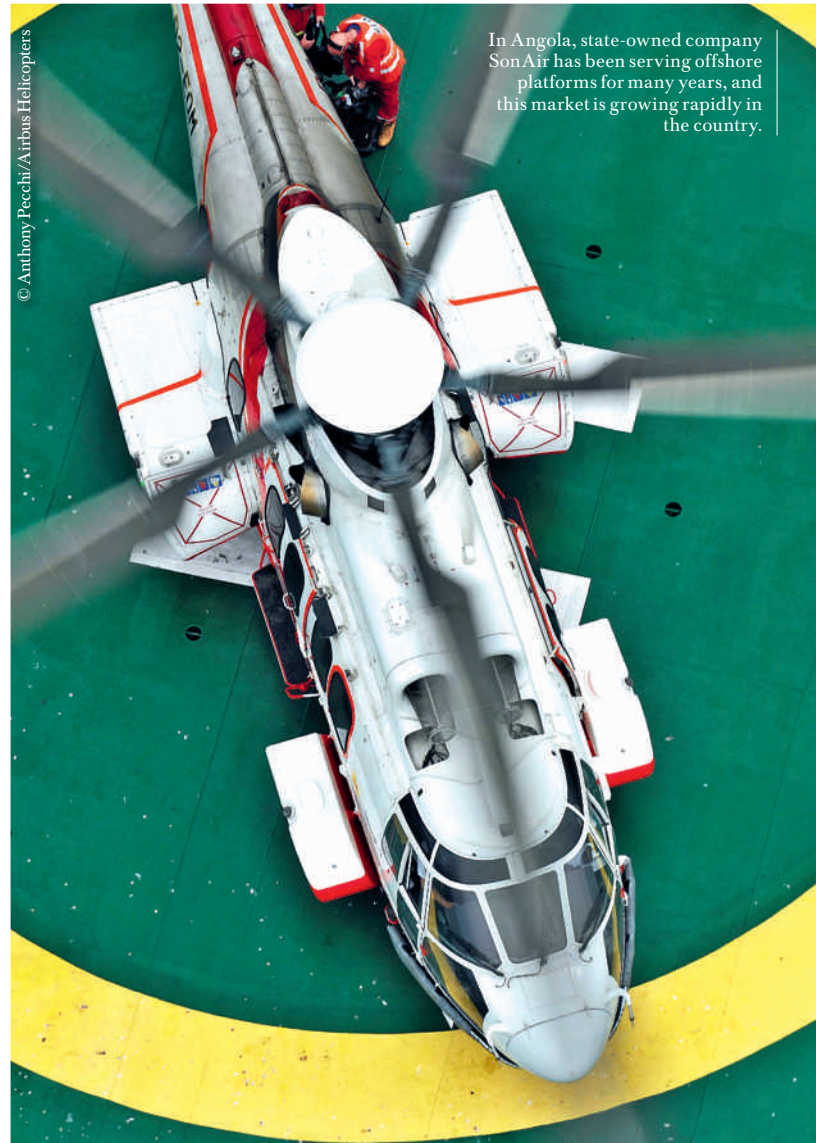
and less reliant on helicopters. Some notable exceptions include Egypt, which has platforms in the Mediterranean and the Red Sea, and Tunisia. Oil & gas activities are also increasing in eastern Africa in “new territories” such as Tanzania, Mozambique and Kenya. The types of helicopter operators vary according to the country and the past history of each site. The lion’s share of the market has traditionally been held by international operators with a great deal of experience in the industry. They’ve been present for many years now in countries where they can fly under their own colors. Notable examples include the French operator Heli-Union, which is active in western and central Africa (Cameroon, Gabon, the Democratic Republic of the Congo); the Belgian company NHV, and the U.S. companies PHI and Bristow in Ghana; and the Canadian operator CHC, one of Airbus Helicopters’ biggest civil operators, which is active in Mozambique and Tanzania.

On the other hand, in North Africa there are two large domestic

companies: Tunisavia in Tunisia and Petroleum Air Service (PAS) in Egypt. Tunisavia has been an Airbus Helicopters customer for the past thirty years now, and PAS currently operates the EC135. In Angola, state-owned company SonAir is a major operator of the Super Puma, and has been serving offshore platforms for many years. The market is growing rapidly in the country. A trend we’ve noted in new oil-producing countries is a transition towards local helicopter operators, who are often keen on technology transfers. In Kenya, for example, Everett Aviation is now operating several Dauphins.

We’ve also seen instances where international companies form joint ventures with local players, as is the case with Caverton, which has formed a partnership with Dancopter and Heli-Union in Nigeria.

But many markets are still wide open, which is why we work very closely with the oil & gas companies, who are still the end users and primary decision-makers.”



© Anthony Pecchi/Airbus Helicopters

In Angola, state-owned company SonAir has been serving offshore platforms for many years, and this market is growing rapidly in the country.

GOVERNMENTAL MARKETS

MULTIPLE MISSIONS

As local economies continue to develop in Africa, enormous security needs have emerged in terms of law enforcement, public safety, and public services in general. The potential helicopter market is enormous as well, as illustrated by the three Airbus Helicopters operators below.



1

© Mark Mansfield



2

© Patrick Penna/Airbus Helicopters



3

© Anthony Pecchi/Airbus Helicopters

1 SOUTH AFRICAN POLICE SERVICE: TRIED AND TRUSTED

In countries where peace has returned and law and order restored, public agencies are now performing security and surveillance missions once reserved for the military, and the helicopter market for police missions has been growing steadily over the past five years.

One operator in particular has become the reference in this area, based on its many years of experience: the South African Police Service, which operates 29 Airbus Helicopters rotorcraft. Its fleet of Ecureuil, BO105 and BK117 helicopters perform a wide variety of missions out of nine bases located both in urban areas and in the bush: crime fighting, search and rescue, the war on poachers and illicit cultivation, and beach and highway patrols are but a few.

Each helicopter performs 150 flight hours per year to serve the country's 60 million inhabitants.

2 MOROCCAN ROYAL GENDARMERIE: THE MULTI-MISSION SPECIALIST

The Moroccan Royal Gendarmerie, which celebrated 50 years of collaboration with Airbus Helicopters in April 2012, operates a grand total of 31 helicopters from the company's product range. Such a varied fleet provides the gendarmerie with multiple operational capabilities to serve the Moroccan people.

Search and rescue and air ambulance missions (with a specially-equipped EC135) are prime examples, but the gendarmerie also fights fires and participates in the war on crime and trafficking (on both sea and land). Two Super Pumas (an AS332 and EC225) are used specifically to transport the King of Morocco and his guests.

Similar to those in South Africa, the most modern helicopters operated by the gendarmerie log about 150 flight hours per year in their missions to serve the country's 32 million inhabitants.

3 RENEWAL PROGRAM IN GABON

In Gabon, three AS332 L/L1 Super Pumas are used exclusively to transport the country's president and his guests. The fleet also includes an SA330 L Puma and two AS342 L Gazelles (soon to be replaced by two EC635s, the military version of the EC135), used respectively for logistics and escort missions. This setup is exemplary for these types of operations in subequatorial Africa. The Republican Guard is just one part of the government fleet, which includes approximately twenty other Airbus Helicopters rotorcraft that mainly serve the Army Air Corps and the National Police Force. Many of the helicopters have reached a venerable age, which is why Gabon kicked off a fleet renewal program two years ago to introduce next-generation EC120s and EC135s.

Tropic Air lets its customers live out their “wildest” dreams on its flying safari tours in eastern and southern Africa. An interview with Ben Simpson, director of operations.

A FLIGHT ON THE WILD SIDE

© Tropic Air



“In certain conditions, we can descend to within 50 meters of the wildlife to give our guests an outstanding view,” said Ben Simpson, director of operations at Tropic Air.

© Tropic Air



What makes Tropic Air so unique?

Ben Simpson : With our helicopters, we can offer groups of up to four people a once-in-a-lifetime experience in Africa:

in just seven days, they can see as much of the continent as it would normally take three weeks to visit by road. The tour includes 25 hours of flying on average, usually with the doors open. We have a great deal of experience working on nature films, so we know how to get up

close to the animals without letting the sound of the aircraft disturb them. In certain conditions, we can descend to within fifty meters to give our guests an outstanding view of the wildlife. Thanks to our in-depth knowledge of the terrain, we offer the most intense experience on the market. The proof is that word-of-mouth has been our best advertising!

Is tourism your only activity?

B.S.: Tourism makes up 65 percent of our business. The other 35 percent is extremely diverse. We do highly specialized aerial work, mainly for the mining and oil & gas industries, and we do aerial filming, environmental protection, search and rescue, and air ambulance missions. All our pilots also are certified rescuers, and we work with the Kenyan mountain search and rescue agency. As the oil & gas sector continues to grow, we may expand our fleet to include twin-engine rotorcraft.

What do you like most about the AS350 B3 Ecureuil?

B.S.: It's such a rugged and reliable machine. We can fly hundreds of kilometers from our base with one pilot and four passengers in complete safety.

HELI-SAFARIS

Gazing at breathtaking scenery, tracking wild animals, flying to mountain peaks and lakes, and even fishing for unique local species are just a few of the highlights of heli-safaris.

There are only about six operators on the market, based mainly in Kenya and to a lesser extent in Tanzania. A total of 24 helicopters are used for these types of flights, with the Ecureuil B3 being the most popular choice. Tropic Air is a market leader.

TROPIC AIR

Tropic Air is a private company with a staff of 65. It operates four AS350 B3 Ecureuils and a fleet of single-engine airplanes out of its base in Nanyuki, at the foot of Mount Kenya, where it owns its own airfield. The company performs all its own maintenance on its aircraft – including engine overhauls – making it a completely autonomous operation.

It also offers excellent “hot & high” performance, enabling us to climb up to 17,000 feet on Mount Kenya. We have no problem landing at 10,000 feet with four passengers and their bags – and even at 13,000 feet with three passengers. As far as I know, no other helicopter in its class can claim the same.

NH90

Article **BELÉN MORANT**

PERFORMANCE PROVEN IN OPERATION





WATCH A VIDEO OF THE
NH90 AT ROTOR ONLINE
www.airbushelicopters.com

By the end of 2013, 12 of the 13 NH90 customer countries had received their NH90s, with a total of approximately 180 delivered since the program's beginning out of the 532 units ordered.

NH90s have been progressively entering service in recent years, and already have served in important theaters of operations. Italy and then Germany deployed their NH90s to Afghanistan, while the Netherlands is operating its NFH rotorcraft in the coastal waters off of Somalia as well as in the Caribbean sea. The NH90s have been successfully

performing a wide range of missions: search and rescue, troop transport, medical evacuations, and maritime surveillance for anti-piracy operations (see *Rotor Journal 95*). The operational feedback has been outstanding, both in terms of performance levels and mission capacity, and has confirmed the superiority of the aircraft and of its advanced mission system (radar, fly-by-wire, etc.). Maintenance has also gone well, with certain fleets reporting availability rates of 80 percent. To date, the worldwide NH90 fleet has logged well over 40,000 flight hours.



© R.A.F.O

WORKING MARVELS WITH HELICOPTERS

Interviewed by
MONIQUE COLONGES

Yann Arthus-Bertrand hardly needs an introduction. His book *Earth from Above* made him an international celebrity. *Rotor Magazine* recently caught up with the exceptional photographer to talk about aerial photography and his love for helicopters.

How did you get started in aerial photography?

Yann Arthus-Bertrand: When I was 30 years old, I went to Kenya to study lions. To earn a living, I took tourists on hot air balloon rides. That's when I first realized how important aerial photography could be. After I returned to France I flew over Paris, and was just as thrilled by what I saw. So I decided to continue with aerial photography because it helps understand, among other things, how people live, their place in their environment, and how they move about. *Earth from Above* gave me the opportunity to provide a lot of information about the current state of our planet and the impact human beings have on the Earth. It was a fascinating project.



"The helicopter is an extraordinary tool for a photographer like me. It's come to the point that, when I take pictures on the ground or from an airplane, I can't help thinking the shot would have been better from a helicopter. I love flying in helicopters."

© Jean-François Bramard/Airbus Helicopters

Why do you use a helicopter for your shoots?

Y.A.-B.: With a helicopter, you can get the best angle, the most artistic shot. It can hover just three meters off the ground, and then climb vertically to 2,000 meters. It also enables many images to be taken over a short period of time. And, of course, there's something magical about the helicopter. It's like an airplane that you can land anywhere. It's such an incredible machine – in particular for rescue work. Whenever a tsunami, an earthquake or a cyclone strikes, the helicopter is indispensable for saving lives. It's such a vital tool that we always put our work aside for a few days whenever a natural catastrophe hits, because helicopters have much more important duties in such circumstances. The helicopter also is an excellent way of showing people how beautiful the world is. People seem to have forgotten how to use their eyes... the Earth's beauty is so obvious to them that they don't see it any more.

Are there any images you'd still like to take but haven't yet had the opportunity?

Y.A.-B.: I've taken many, many pictures over the years, and I've been extremely fortunate to visit so many fabulous places. In a couple weeks I'll be in Burma, and next week I'll be travelling to Pakistan. For the first time ever, I'll be flying in one of the Pakistan Army's B3s. I really enjoy what I do. I'm not frustrated at all – in fact, I'm quite satisfied.

What first comes to mind when you think about a helicopter?

Y.A.-B.: Respect. It may be just a machine,

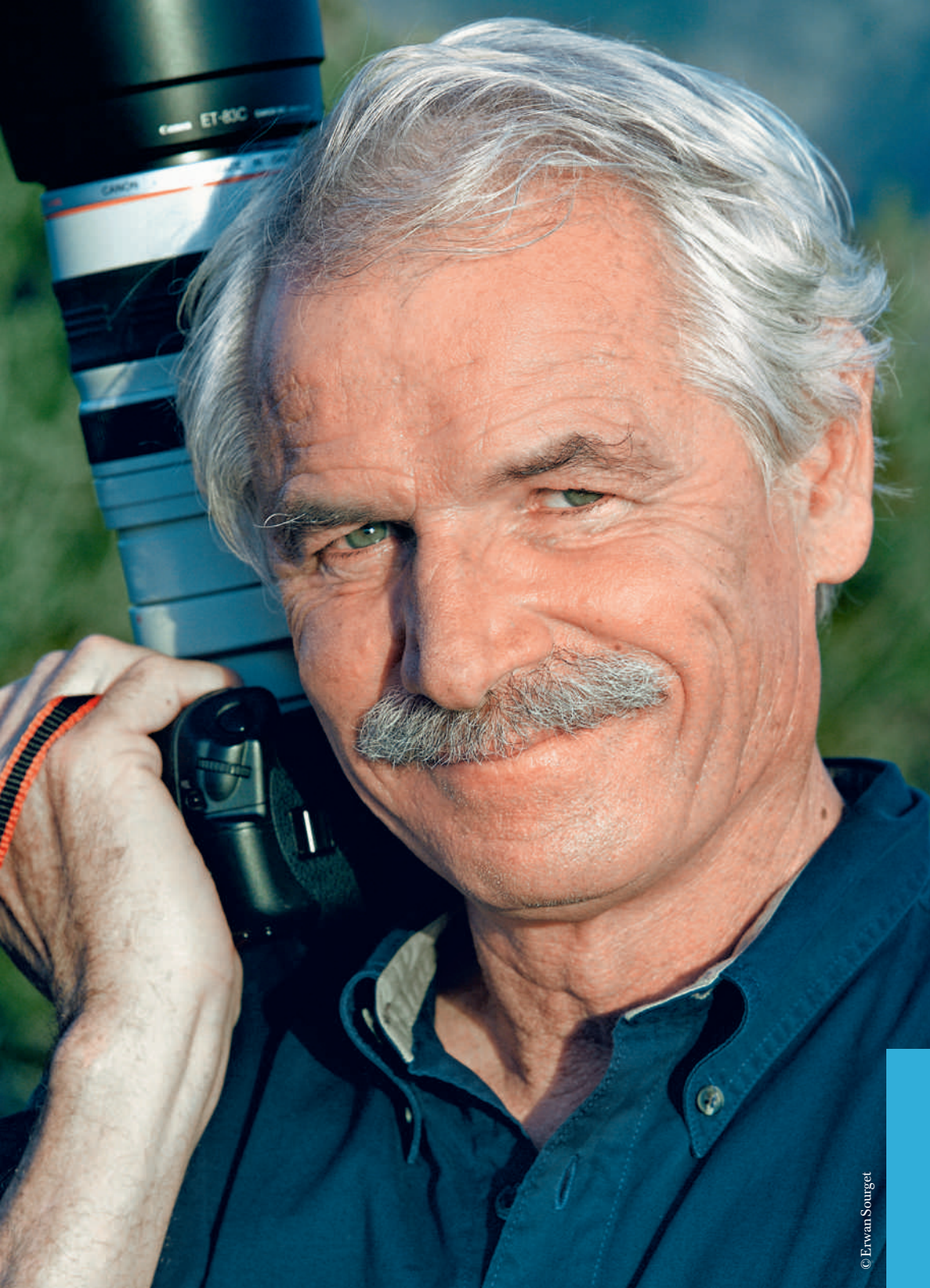
but the engineering involved is extremely complex. It's also an extraordinary tool for a photographer like me. I have reached the point that, when I take pictures on the ground or from an airplane, I can't help thinking the shot would've been better from a helicopter. I love flying in helicopters. When we can make helicopters with lower sound levels and fuel consumption, they'll be even better, but it's already a remarkable machine. For me, the helicopter is synonymous with freedom: there's nowhere it can't take you! But beyond the machine itself, the pilot is also extremely important. The photo is as much his creation as it is mine. He's the one that takes me to just the right spot. The pilot and I have to be on very friendly terms. Both of us, working together, have to love what we're filming. It's very important.

What do people living locally think of helicopters?

Y.A.-B.: In and around Paris, people hate helicopters and are always complaining about noise. I was in Switzerland recently and heard the same complaints. But in Ethiopia it's the exact opposite. As soon as we land there's a mad rush, with hundreds of people packed around the helicopter and kids trying to touch everything.

Which helicopters are the best in your opinion?

Y.A.-B.: At the risk of sounding like a chauvinist, I would have to say the French helicopters. I've flown all around the world and everywhere I go the pilots are crazy about the Ecureuil B3. It's in a class of its own. I've flown in every type of helicopter and I still think the Ecureuil is the ideal



Yann Arthus-Bertrand has always taken great interest in the animal world and nature. In addition to being a successful photographer, he is now equally well known for his environmental work.

“The helicopter also is an excellent way of showing people how beautiful the world is.”

CLOSE-UP

Mediterranean with Airbus Helicopters

Airbus Helicopters was proud to participate in “Mediterranean,” a 90-minute documentary film made by Yann Arthus-Bertrand and Michael Pitiot. The two spent many hours flying in a helicopter around Marseille to capture images for the film. The documentary is an aerial journey to show the influence of the Mediterranean Sea on the history of the people who live on its shores. It premiered on French television in February 2014.

© Erwan Sourget

machine. But let me say it again: The helicopter is a fragile and complex machine that has to be well maintained. It's very important. As I get older, I get more and demanding about the operators I fly with.

How do you finance your projects?

Y.A.-B.: Helicopter flights are expensive. When I first started work on *Earth from Above*, I sent out a hundred letters seek-

ing financial partners, but I had just one reply – from someone who eventually lost interest in the project. So I started to take aerial photos of all the Club Med resorts around the world. They quickly realized that they had a lot to gain by using my pictures in their brochures. In exchange, I asked them for five flight hours in a helicopter, and that's how I started on *Earth from Above*.

The new AS332 C1e Super Puma

Article
BELÉN MORANT/RÉGIS NOYÉ

Starlite is launch customer for the AS332 C1e Super Puma, a new helicopter concept combining robustness and multifunctional capabilities that will help Airbus Helicopters conquer the utility market.

MULTI-MISSION HEAVY-LIFT WORKHORSE

Airbus Helicopters' AS332 C1e Super Puma has now hit the market. The new helicopter boasts low operating costs and was designed to perform a wide range of missions, including passenger and cargo transport, search & rescue, and medical evacuations. The AS332 C1e Super Puma is also ideal for sling loads, as its lifting functions have been optimized. All these features make the new helicopter perfectly adapted for the utility market. Production times have been slashed to less than a year thanks to industrial standardization of the C1e model, meaning faster deliveries. The helicopter is offered with predefined equipment, and customers can then choose the options they want from a "shopping list". If customers don't find what they're looking for on the list, Vector Aerospace and the Airbus Helicopters network of subsidiaries and partners can customize the aircraft.

The AS332 C1e Super Puma offers a spacious cabin and high payload (maximum takeoff weight of 8,600 kg) to accommodate up to fifteen passengers in complete comfort. It should be noted that this helicopter has an operating range of 642 km without external tanks, meaning it offers

excellent endurance for demanding missions.

Safety is also a strong selling point for the AS332 C1e, as it benefits from the Super Puma family's more than three decades of operational experience. Its avionics and autopilot – the same as those found on the EC225 – offer greater precision and stability throughout the flight envelope, in even the most extreme operating conditions. Its excellent performance levels in hot and high conditions – which are commonly encountered in operations for humanitarian organizations – make this helicopter the ideal choice for utility operations in South America and Africa.

"The market sorely needed a robust and modern medium/heavy helicopter offering exceptional performance levels across a wide variety of missions, such as passenger transport, lifting and hoist work," explained Fabrice Arfi, Airbus Helicopters Vice President for Business Development and Sales Coordination. "There was a gaping need for helicopters on the humanitarian market, for example. Now, with the C1e, Airbus Helicopters can offer a new product that benefits from all our know-how. We're very confident that it will be a huge success!"



WATCH A VIDEO
OF THE NEW AS332 C1E
AT ROTOR ONLINE
www.airbushelicopters.com



© Jérôme Deulin/Airbus Helicopters



© Jose DaSilva/Airbus Helicopters

STARLITE AVIATION

High Performance in Demanding Conditions

Based in Ireland and South Africa, Starlite Aviation offers a wide range of services to government customers, humanitarian NGOs (including the World Food Program) and major logistics companies around the globe. While its missions can be quite specialized – such as medical evacuations and aerial surveillance – they all share a few common traits: very little advance notice and extreme operating conditions. Over time, AS332 C1e Super Pumas will be replacing and expanding the current fleet of ten SA330 J Pumas that have been providing Starlite with excellent service for a dozen years.



Since 1976, 113 cases of lightning strikes have been reported for the entire fleet across 64 million flight hours. Only one of these strikes resulted in an accident, and the helicopter's compliance with regulations and lightning protection standards was not called into question.

© Anthony Pecchi/Airbus Helicopters



WHEN LIGHTNING STRIKES

Article
MONIQUE COLONGES

As an important step in a new helicopter's certification, lightning tests validate the aircraft's ability to return to base and land in complete safety following a lightning strike. An example is the EC175.

Protecting helicopters against in-flight lightning strikes is an essential safety aspect, and Airbus Helicopters complies with current regulations (CS/FAR Parts 29 and 27) to protect its aircraft against catastrophic effects from lightning.

Two effects must be taken into consideration. Direct thermomechanical effects, caused by extremely high electrical currents passing through the aircraft, can heat up materials and cause extensive or even catastrophic mechanical damage. Indirect effects, due to electromagnetic coupling with the helicopter's electrical and electronic systems, can disrupt or damage electronic equipment if it is not protected.

For the qualification testing of direct effects, a standard 200 kA lightning current is either injected directly into the component to be tested (main rotor blade, pitch control rods, as examples) or into test specimens that are representative of composite fuselage components in their final definition. A portion of the lightning tests (main rotor blade, pitch control rods) for the EC175 certification was

performed in China at a specialized test center (HTIEP) selected by the Chinese design office (CHRD). Before selecting the test center, CHRD performed an audit on HTIEP with technical support from lightning and quality specialists and from Cobham, a British lightning test facility recognized by certification agencies as an expert in the field.

A FIRST ELEMENT FOR HELICOPTERS

To test indirect effects, a small-scale lightning current is initially generated on the helicopter structure between pre-defined input and output points. Measurements are then simultaneously taken on all system cabling subject to certification to define the peak lightning impulses. In a laboratory, these same impulses are then injected into the systems' input and output points to test how robust they are. The tests were conducted at the DGA⁽¹⁾ test

center in Toulouse, with additional 3D digital analysis provided by the design office to make sure that all possible lightning configurations were taken into account. Design office engineers had to develop specialized techniques to create the 3D tools.

(1) French armament procurement agency

LAST MINUTE

EASA certifies the EC175

The certification of the EC175 has been completed, with the European Aviation Safety Agency (EASA) issuing the type certificate on January 30, 2014. The first three EC175 helicopters will be delivered this year to our clients.

PERSONALIZED CABIN LAYOUTS

Article
MONIQUE COLONGES

Airbus Helicopters offers a wide array of cabin layouts that can be perfectly adapted to its customers' missions. The same helicopter model can be delivered in completely different configurations.

When it comes to cabin interiors, anything (or almost anything) goes at Airbus Helicopters, which makes every effort to meet its customers' requests and adapt layouts to all types of operational needs. Among the many different components that can be customized are covering panels, the finishing, seat configurations and IFE (in-flight entertainment) systems. While technical performance and flight safety always remain the top priority, Airbus Helicopters takes special care to maximize the functionality of its cabin interiors and ensure comfort.

"Across our entire helicopter range, the various options featured in our catalogue enable us to immediately fulfill 80 percent of the requests we receive," said Thierry Roman, who is in charge of the Cabin Interiors & VIP unit in Marignane. "For the remaining 20 percent, we can always find suitable customization solutions. Each market segment has its own special features, however. The EC155 VIP version, for example, has three cabin configurations (for seats and furnishings) with about a dozen additional options available. For the oil & gas sector, we offer cabin layouts that are specifically adapted to the survival suits the passengers wear during offshore flights. We account for the bulky suits to optimize comfort for the passengers' knees and shoulders." Helicopters that perform air ambulance missions are fitted with much the same equipment as their road-based counterparts, such as a stretcher, vacuum mattress, splints, ventilation system, and a defibrillator. An incubator can also be installed for transporting newborns. Customized military helicopters may be

equipped with flexible interior panels in



Airbus Helicopters takes special care to maximize the functionality of its cabin interiors and ensure top-notch comfort.



Leather seats when only the best will do. |

order to establish the optimal balance between performance and weight. Airbus Helicopters also can create luxury interiors offering a wide range of comforts, from the Corporate configuration – for which carpeting and leather seats are standard – up to VIP and Executive versions such as those unveiled last spring for the EC175.

"We can do just about anything when it

"For cabin customization, the only limit is the complete safety of the helicopter."

comes to customization work," added Roman. "The only limit we set for ourselves is of course the complete safety of the helicopter."



WATCH A VIDEO OF THE
EC225 VIP AT ROTOR ONLINE
www.airbushelicopters.com



MALAYSIA

Article
BELÉN MORANT

Eurocopter Malaysia⁽¹⁾ has become a key player in its home country, where the company has a 52 percent market share and a training center that has become the reference throughout the Asia-Pacific region. *Rotor Magazine* takes a look at this booming market.

AN IMPORTANT PARTNER

The 133 Airbus Helicopters helicopters currently in service on the Malaysian peninsula and the island of Borneo can be divided into four main market segments. First, military and parapublic missions are carried out by the Royal Malaysian Air Force with its fleet of EC725s (twelve already acquired), 22 Alouettes and six Fennecs (operated by the Royal Malaysian Navy). The country's coast guard also flies three Dauphins, and the Royal Malaysian Police eleven AS355 Ecureuils.

The second market segment is one that just keeps growing in Malaysia: oil & gas. Local operators such as MHS and Awan Inspirasi (see *interview*) fly EC225s, Dauphins and Ecureuils to serve offshore platforms in the South China Sea and off of Borneo. The EC175 may prove to be the ideal candidate for this segment,

as there is high demand for helicopters in its category and operators are looking to diversify their fleets.

The third segment is VIP and Corporate transport, where the Ecureuil, EC135 and EC155 are the most popular choices.

Lastly, Eurocopter Malaysia is helping to develop a full-fledged utility market, as demonstrated by the recent purchase of an AS350 B3e Ecureuil, an EC135 and an EC225 by Aerial Power Line to inspect power lines and erect electrical transmission towers. Deliveries will be made in 2014 and 2015.

CHALLENGES AND OPPORTUNITIES

Created in 2002 to tap into the region's enormous potential, Eurocopter Malaysia is responsible for sales, maintenance and pilot training in Malaysia. For this last activity, the subsidiary has an EC225/EC725 full flight simulator that has already attracted a large number of customers from Australia and throughout Asia—the only exception being China, which has its own simulator.

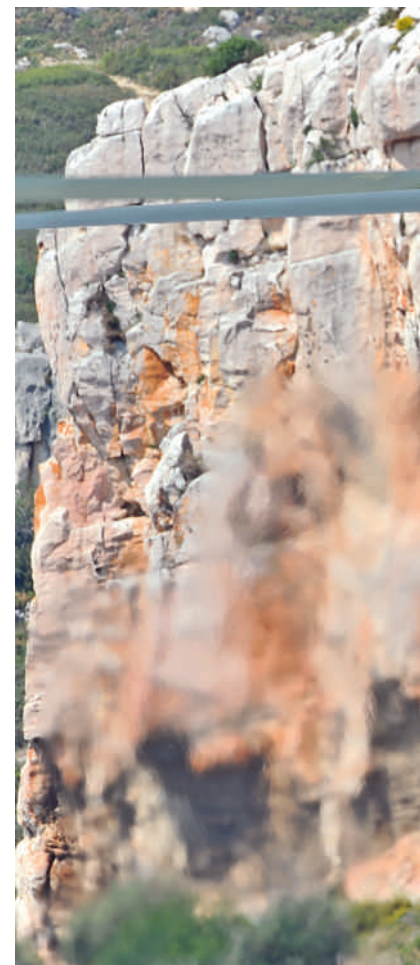
"The new EC225/EC725 simulator entered service in January 2013, and just a month later, in February, we moved into our new main offices at Subang Airport," said Pierre Rossignol, CEO of Eurocopter Malaysia. "The new site has 12,000

square meters of floor space, and we'll now be able to work even closer with our customers and expand our maintenance and repair offer to include blades and dynamic assemblies. As of early 2014, we'll also have the necessary capabilities to perform major overhauls on the Super Puma family."

(1) The Rebranding of subsidiaries is scheduled for 2014.

SPOTLIGHT**New Capabilities in East Malaysia (Malaysian Borneo)**

Starting in April 2014, Eurocopter Malaysia will be adding an extension to its maintenance center located in Miri, East Malaysia (Borneo) in order to offer more proximity services to its operators and customers in the region. New services available in the spring will include the "Full Maintenance Contract" for helicopters operating in the sector. Over time, the Miri maintenance center will be staffed with approximately twenty people.



"We're investing in technology transfers aimed specifically at research and training through local resources. It is essential for us to provide economic support for the country and the many talented people we're privileged to work with."

“The last of the twelve EC725s ordered by the RMAF will be delivered very soon. The program has proceeded without a hitch and the customer is extremely satisfied. We hope to be able to build on this successful cooperation to win other governmental and military markets,” said Mr. Rossignol.



© Anthony Pecchi / Airbus Helicopters



© EC, Malaysia

FACT & FIGURES

Eurocopter Malaysia

- Date of creation: 2002
- Fleet: 133 helicopters
- Main offices: Subang Airport
- Staff: 120
- Country: Malaysia
- Services: sales, maintenance, fleet management, overhauls, blade and dynamic assembly repairs, training, PBH services [Support per flight hour]



© Lorette Fabre

FOUR QUESTIONS FOR...

DATUK HANIF DARIMI,
CEO OF AWAN INSPIRASI.

Could you explain why Malaysia is a strategic actor in the oil & gas industry?

Datuk Hanif Darimi : The oil & gas market in Malaysia is expected to undergo major developments. Malaysia is strategically located at a crossroads of energy trade routes and has the third largest oil reserves in the Asia-Pacific region. The country also benefits from a very politically stable environment which, of course, reassures investors when they decide to provide backing for the oil & gas sector. This is why Petronas decided to launch a helicopter fleet renewal plan.

How does the EC225 answer your needs for the missions you perform?

D.H.D.: Awan Inspirasi was the first operator to introduce the EC225 in the Asia-Pacific region. Created in 2008, our company has unique know-how and already distinguishes itself as the only service provider in Malaysia operating in deep waters. The EC225 answered our needs perfectly and was a strong asset for deep-water exploration and oil and gas operations in the country.

How does Awan Inspirasi benefit from the training offer at Eurocopter Malaysia?

D.H.D.: We are blessed by the opening of a new Airbus Helicopters center in Malaysia. We particularly appreciate the installation of a state-of-the-art EC225 Full Flight simulator in Subang. The recent establishment of a Eurocopter training center has been very beneficial to our company, both in terms of the availability of the simulator and the cost-effectiveness of the training.

How do you value your partnership with Airbus Helicopters, especially during the issues with the EC225?

D.H.D.: Awan Inspirasi has stood by Airbus Helicopters on the EC225 issue. Of course, the company was also impacted by the grounding of the EC225, but we trusted Airbus Helicopters to make all possible efforts in order to fulfill the authorities' requirements and resume EC225 flights to transport our passengers and customers in complete safety.

TAMING CANADA'S WILD RESOURCES

Article
TREVOR HUGGINS

Canada's provinces of Alberta and British Columbia are home to operators with growing Airbus Helicopters fleets. Alberta is rich in stunning landscapes, and even richer below the surface with an oil reserve estimated at 170 billion barrels – the second largest after Saudi Arabia – in the form of oil-rich bitumen deposits. British Columbia is a powerhouse of hydroelectricity, with a vast distribution network to maintain in conditions that often are perilous.

As the center of Alberta's thriving oil sands industry, Fort McMurray is a popular base for helicopter operators helping to solve the logistical challenge of traveling to and from areas of remote forest and swamp. Vortex Helicopters, for example, deploys three AS350s for a variety of missions according to the season. In summer, the work involves flying environmental officials into the

wetlands to take air and water samples, oil industry surveyors to investigate possible drilling sites for the following winter and engineers to study future roads. In winter, the focus is on ferrying people, equipment and construction materials to drill sites. "The AStar is popular because of its platform – the forward-facing passengers and its ability to do external work, such as

longlining – and 50 percent of the work here is external," explained company president Ryan McAssey.

Like Vortex, Phoenix Heli-Flight carries out the full range of oil and gas industry operations, along with firefighting, cargo transport and forest management. However, there can also be more dramatic missions. "If there's a mass casualty, like a bus crash, we can convert all of our B2's, B3's, the B4 and both Twin Stars into medical aircraft in minutes," says Phoenix President Paul Spring. "In 25 years, our A Stars have probably saved 250 lives – because of that flat cabin floor and the ability to remove the front seat, put a patient there and two paramedics behind the pilot. We respond to around 60 code red trauma calls a year and at least 10 people per year would die without the help of our helicopters."

Since nearly half of Alberta is covered by forest, Fort McMurray's operators are also kept busy carrying logging teams, equipment and saplings for re-planting. However, forestry inevitably means firefighting as well. "It's precision work, especially when it comes to dealing with hotspots, when you need to guide a 130 ft. longline through the trees and you do literally feel the heat," underlines Don Cleveland, Operations Manager for



Blackcomb Aviation has a fleet of single and twin-engine AS350/AS355s.



© Thinkstock

Lakeshore Helicopters Ltd. “The vertical reference window on our B3E really helps with the slinging. It gives you really good peripheral vision.”

HYDRO OPERATIONS IN BRITISH COLUMBIA

British Columbia has no shortage of beautiful scenery, or hydro-electricity. Generating company B.C. Hydro has more than 18,000 km. of power lines – all of which need maintaining with the help of helicopters. Precision, maneuverability and safety are common themes for operators and their pilots.

Finnair, which recently took delivery of an EC135 P2E, provides power line inspections during spring and autumn. “We usually fly two linemen, 20 to 50 feet above the lines at around 50 knots, to see if there are any problems, such as lightning damage or if hunters have shot out the porcelain insulators,” says Finnair President Wayne Finn. Maintenance usually is carried out in summer by lowering engineers onto the steel towers with a 120 ft. longline or landing on it. It’s a challenging spot to land,” he concedes. “It’s about 4-10 ft. wide and with half a million volts running beneath the helicopter, there’s not a lot of room for error.”



© Hearth Mofiat / Vertical Magazine

| Finnair recently took delivery of an EC135 P2E.

Another delicate operation is “threading the needle,” which involves threading a lightweight rope through a tower using a metal strut with two hooks – known as a “needle” – from a longline. The rope is then used to draw along the heavy copper power cable. “It’s very high precision work and involves long-duration hovering over the top of power lines,” explained Jonathan Burke, President of Blackcomb Aviation – which has a fleet of single and twin-engine AS350/AS355s. “Thanks to new helicopter techniques, utilities can efficiently service power lines while they’re still carrying power and avoid disrupting supplies to consumers.”

CLOSE-UP

Help with flood relief in Alberta

Several Airbus Helicopter operators took part in rescue missions during June when heavy rains caused the worst flooding in Alberta’s history. About 150 people had to be rescued from rooftops by helicopter as 100,000 residents were forced to evacuate their homes. The Airbus Helicopters operators responded to calls for help from the Mayor of Calgary and local police, with a total of 32 local states of emergency being declared as water levels rose.

FLIGHT SAFETY

Article
**ALEXANDRE
MARCHAND**

Airbus Helicopters has launched two important new initiatives to improve customer support and flight safety. The goal is to provide flight crews with better training and better information about their helicopters' optimum use and operating limits.



© Anthony Pecchi/Airbus Helicopters

NEW OPERATIONAL SUPPORT

"The main goal of this new initiative is to improve flight safety for our operators and to help them in their day-to-day work," explained Alain Madec, who is in charge of customer support for flight operations at Airbus Helicopters. "To do so, we're answering the questions that the pilots themselves tend to ask."

A new Crew Help Desk has been introduced to complement Airbus Helicopters'

existing technical support services and extend the company's training offer through to helicopter delivery. Christophe Pozzo-di-Borgo, who is overseeing the project, talked about the change in perspective: "More than simply learning how to use a helicopter, it's about how to make optimum use of one. To give just a few examples, crews often ask us about the best way to use the advanced autopi-

lot modes, or how to properly carry a sling load at flight envelope limits."

To answer these questions, the Crew Help Desk has a wide array of resources at its disposal: not only the skills and experience of training centers and instructor pilots throughout the Group, but also the entire range of technical services available at the parent company. An internal database is shared by everyone in the Airbus Helicopters' network to ensure coherent services. Last summer the Dauphin-EC155 family became the first to benefit from the new service and it has since been extended to include the entire range of civil helicopters except for the EC175 and EC145 T2. These two families will be covered in step three of the initiative during 2014.

SPOTLIGHT

"Tell me how you fly, and I'll tell you how to train"

The Operation & Training Needs Analysis unit at Airbus Helicopters develops innovative training solutions for the company's customers. Unit chief François-Xavier de Bengy said the first step involves an in-depth analysis of needs: "We review a wide range of data – including regulations, operations, crew qualifications, equipment requirements and environmental limitations – to define a customized training system for our customers."

This approach now forms a fundamental part of Airbus Helicopters' commercial

offer. The services will be offered to the customer when negotiating a contract, and even when a new helicopter is being developed. In the latter case, the training program that is best adapted to the new aircraft will be defined as far upstream as possible. This philosophy was first applied with the MRH90 for the Australian Armed Forces and the French Gendarmerie's EC145. It has since been introduced for the NH90, EC225, and EC175, and will be employed further down the road for the X4 program.

In the past, I have found it difficult to know where to direct questions such as these, so the new Airbus Helicopters support desk is a great idea."
Captain Paul Whitfield, LuvAir Ltd.

Tough challenges require innovative approaches such as E-HOTS (Enhanced Helicopter On Theatre Services) – a new turnkey solution that unlocks full deployment capacity and cost-efficiency for customers flying in the most demanding theatres of operation.

HELPING CUSTOMERS IN THE HOT SEAT

JOINING FORCES

Launched at the 2013 Paris Airshow, E-HOTS is a new international partnership among Airbus Helicopters, DAHER, Défense Conseil International, Eurotradia International, and Vector Aerospace UK.

By uniting under the E-HOTS consortium, these five companies have consolidated their deployment-specific services and in-theatre expertise to offer an extended global support solution. A supplement to traditional services, E-HOTS provides additional assistance to customers in times of need or during overseas deployment, from conflict and security missions to disaster relief and humanitarian aid.

À LA CARTE SUPPORT FOR ANY SCENARIO

Four service categories – maintenance, logistics, operational support, and supplementary services – make up the

backbone of E-HOTS and are a complement to fundamentals like on-site technical and logistical support. These categories include new services such as assets leasing, flight operations personnel, training, mobile maintenance containers and a wide range of integrated facility services.

To provide flexibility, the services are divided into modules that can be individually selected to suit each deployment and adapted as mission needs evolve. Using a single interface, the system streamlines management and enables the pooling and sharing of resources.

A VARIETY OF ADVANTAGES

The core objective of E-HOTS is to provide closer industry support in the field, cost reductions, and a high level of reactivity – key needs for both highly experienced operators and those developing their capacity to deploy.

In today's operational and economic

environment, the benefits of external support are clear: significant cost-savings, an improved availability of in-theatre assets, and increased flight hours.

THE STORY BEHIND E-HOTS



© Jamie Choo

“Based on experience gained in the field these past few years – particularly in Africa and Afghanistan – the United Nations, NATO, the European Union and several armed forces have underlined the

importance of forging closer ties with industry in certain theatres of operation. E-HOTS answers this expressed need and goes even further to better support any type of operator deploying in demanding environments. The choice of partners for the consortium was natural, as many of its members have already worked together in the past and proven their capabilities. What's more, the companies that make up E-HOTS are all active internationally with vast in-theatre experience, a crucial point for this program and our customers.”

Jamie Choo, Business Development Manager at Airbus Helicopters, and E-HOTS Lead Manager.



E-HOTS provides additional help during emergencies, armed conflicts, security missions, natural disasters and humanitarian work.



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FLYING TO A PINK FLOYD BEAT

Interviewed by
COURTNEY WOO

Last July, Pink Floyd drummer Nick Mason visited Airbus Helicopters' Marignane site for a demonstration flight in an AS350 B3e Ecureuil. The music legend – the only consistent member of the band throughout its nearly 50 years of existence – is an avid pilot who often swaps his drumsticks for the controls of an AS350.

What inspired you to take to the skies?

Nick Mason: I started flying about 30 years ago because I was actually frightened of flying. When I was touring with Pink Floyd, we took quite a few flights across America, occasionally through bad weather, so I became very nervous about flying – we all did. I confided in my old friend Vic Norman who runs an aerobatics and wing-walking team in England, and he suggested I learn how to fly. It was amazing advice. Flying became my therapy.

What was your first personal flying experience like?

N.M.: It was actually more like a shopping trip! Vic found me an instructor named Brendan O'Brien who gave my first flying lesson on a French Jodel fixed-wing airplane. We flew to Paris

to purchase my first flying jacket. I flew fixed wing for 10 years until David Gilmour, our guitar player, bought a small helicopter. My wife, who is a real enthusiast and had learned to fly as well, said we should try helicopters, so we started learning on a Robinson and then switched to a JetRanger, which we used to fly with our children from London to our house in Wiltshire.

Why did you transition to Airbus Helicopters aircraft?

N.M.: I wanted to improve my flying and get something really good, so I took a flight in an Ecureuil AS350 – and it really clicked. Also the cabin layout of the Squirrel really suited us well because the kids were getting older and starting to move around more. With the Ecureuil, you don't have to worry about weight, balance and safety.

Your blue and white cloud-patterned livery is quite well known. How did it come to be?

N.M.: We were having dinner with Damon Hill, the Formula 1 racing driver, and Peter Boutwood, the guy who did all his graphics and is now managing director of Noble Cars. We didn't want a corporate color, so he sent me a mini door panel airbrushed with the cloud scheme. It's a bit of madness, really. It's sort of like camouflage. But it's totally different from most liveries. It's hard to believe that was 12 years ago – the Ecureuil still feels like a brand new aircraft!

How would you describe your experience today in the AS350 B3e?

N.M.: You still appreciate the magic of helicopters even decades later. There is something truly extraordinary about just lifting up and hovering five or six feet off the ground. The first time was just as exhilarating as lifting off with Olivier [Gensse, Airbus Helicopters test pilot] today. It's like, whoa!

You're also an accomplished race car driver. What aspect of your personality does flying and racing cater to?

N.M.: Both pursuits complement the music element. Flying and racing are very much about the individual, whereas working as a drummer in a band is a shared experience. We joke that if someone makes a mistake during a performance, the first thing you do is turn around and stare angrily at someone else in the band, saying "why did you do that!" With flying and driving, you can't really make excuses like that. You're responsible.

What features of the B3e appeal to you the most?

N.M.: It's at the top end of private helicopter flying. Once you move beyond that you start getting into features that actually increase the workload for a private pilot. What is great about the B3e is that it's still manageable: It has skids rather than a retractable undercarriage; it's a single-engine but packs more power than a twin.



Teams working on the Tiger and EC175 were treated to a surprise visit by Pink Floyd drummer Nick Mason.



© Eric Kaz/Airbus Helicopters

“Driving sports cars and piloting helicopters are more of a personal pleasure, while playing drums in a group is something you share with others.”

A FEW EXTRA NOTES

Pink Floyd songs recalling helicopter flight:

“Learning to Fly” features a recording made on twin-engine aircraft – we plugged the tape recorder directly into the intercom system. The early song “Set Controls” has a minor key that sounds like a helicopter.

Memorable moment of Airbus Helicopters visit:

Flying with Olivier near the mountains. I love the feeling of flying to a ridge and dropping down. In Southern England we don’t have that geography.

Favorite vista:

Definitely when we flew around the mountains near Queenstown, New Zealand.

What’s next:

Musically: archiving and anthologies. As a pilot: more cross-Channel flying to Paris and to the 24 Hours of Le Mans race.



© Eurocopter India

The Minister for Rajasthan and the Minister for Water Resources were present at the launch of a pilot project to map aquifers.



© Eurocopter India

The helicopter selected for the mission was an AS350 B3 Ecureuil operated by Himalayan Heli Services Pvt Ltd.



The Ecureuil carries a 30-meter probe fitted on a 300-square-meter frame.

INDIA

An AS350 B3 Ecureuil has been fitted with a 30-meter long probe to discover new sources of underground drinking water in India.

INDIA: FROM ON HIGH, SEARCHING FOR WATER BELOW

Article **NEHA ADHIKARI**



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www.eurocopter.in



© Eurocopter India



© Eurocopter India

The probe measures the generated magnetic field to see the water distribution down to depths of 200-300 meters.



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The pilot project has been a great success, as underground water has been detected in several different regions of the country.

Realizing that India is facing water shortage and that the country's major water demands are met through groundwater sources, the ministry of water resources launched a pilot project in April 2012 to map aquifers. Expected to be completed by May 2014, the project is focusing on finding clean drinking water with the help of airborne technology.

Selected on the basis of soil types and topography, six areas have been identified for the project, including the cities of Nagpur and Jaipur, the states of Karnataka and Tamil Nadu, and the district of Patna. This initiative is part of a large-scale effort by the National Project on Aquifer Management, and will cover about 21 million square kilometers. The research work, which began in October 2013, is being performed in conjunction with the Central Ground Water Board and National

Geophysical Research Institute and funded by the World Bank.

The helicopter selected for the mission, an Ecureuil AS350 B3 operated by Himalayan Heli Services Pvt Ltd, is fitted with a 30-meter probe that has an enormous, 300-square-meter frame. Electromagnetic currents are sent to the ground through a fiber-optic loop, and the magnetic field thus generated is measured to see the distribution of water. The technology makes it possible to use an antenna suspended below the helicopter to scan the Earth's uppermost layers to a depth of 200-300 meters. The researchers can then view subterranean groundwater landscapes as 3D images. The helicopter plays an essential role as it is capable of carrying heavy payloads, making the AS350 B3 the ideal choice for this project. Dr. Shakeel Ahmed, chief scientist at the

National Geophysical Research Institute (NGRI), said: "The main objective of this project is to come up with maps of underground aquifers in different parts of India. This initiative will immensely benefit the country and its people because ground water is being rapidly depleted in many parts of the country. This aquifer system will help us in mapping the groundwater system more efficiently, effectively and accurately."

The project is also using Danish technology developed at Aarhus University, called SkyTEM, a heliborne system that has proven extremely useful for the large-scale mapping of underground water resources in many countries. Suspended beneath the AS350 B3, it is deployed to support the aerial geophysical survey and scans for ground water – a critical resource for human survival. ██████████

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