

# ROTOR

JOURNAL



## INTERNATIONALIZATION

Think Globally,  
Act Locally

## RETROFIT

First Flight  
of the CH-53GA



NH90

# FIRST DELIVERIES OF THE NFH VERSION



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A pretty effective time machine.

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# No. 86



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© EC Chile



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© Hoverfly



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## NH90 Program Achieves a Major Milestone

Lutz Bertling, *President and CEO of Eurocopter*

The NH90 program has reached yet another major milestone. The first two NH90 NATO Frigate Helicopters (the NFH version) were recently delivered to the Dutch and French navies respectively on the scheduled dates that were defined with these customers in June 2008. This demonstrates our ability to develop and implement, in collaboration with our partners, an appropriate plan of action that responds to your needs. This was indeed the case for the configuration called “step A”, which is mainly dedicated for SAR, transport and surveillance missions. The implementation of accelerated decision-making processes within NHIndustries and the introduction of organizational changes in 2008 have now proven to improve program management. More efficient and simplified processes with and by the customer nations contributed significantly to this achievement as well. We are now focusing our attention on building an efficient support network for the NH90 in-service fleet with the armed forces of all customer countries in order to reach the milestone of 10,000 flight hours by the end of this year.

Nevertheless, it is important not to lose sight of the fact that the NH90 is a very complex program, notably with respect to the numerous technological innovations being implemented for the first time. This program serves as a benchmark project that will allow us to introduce a multitude of new advanced features in the next generation of Eurocopter aircraft.

The introduction of such a complex weapon system in the armed forces sometimes, unfortunately, results in unexpected events as well, like what we had to face recently with a technical incident involving an engine of a MRH90 multi-role helicopter—the Australian Army version of the NH90. You, our customers, can rest assured that solving quickly and safely such issues during fleet introduction will be of greatest importance for Eurocopter.

I am confident that with your help and with the assistance of our partners, we will succeed in further achievements in the NH90 program. In the next few months, we will obtain FOC certification for the Tactical Transport Helicopter (TTH) variant of the NH90. You will then be able to benefit from the full operational capability of the NH90 when performing your missions, which is our major objective.

A handwritten signature in black ink, appearing to read "Lutz Bertling".



# DELIVERIES OF THE FIRST NFH VERSIONS OF THE NH90

APRIL 22, 2010 and MAY 5, 2010

The first NH90 NFH was delivered on April 22 to the Royal Netherlands Navy during an official ceremony held at AgustaWestland's Vergiate plant in Italy. The event marked the first delivery of the naval version of the NH90 to a customer for operations. A second NFH version of the NH90 was also delivered to the French Navy on May 5 at the Eurocopter site in Marignane. A total of 111 NH90 NFHs have been ordered by the naval forces of the Netherlands (20), France (27), Italy (46), Norway (14) and Belgium (4). This first delivery is in the MOC version (Meaningful Operational Capability) and will be used mainly for SAR missions, maritime patrols, troop transports and medical evacuations, but over time the NFH will perform primarily anti-submarine and anti-surface warfare missions.





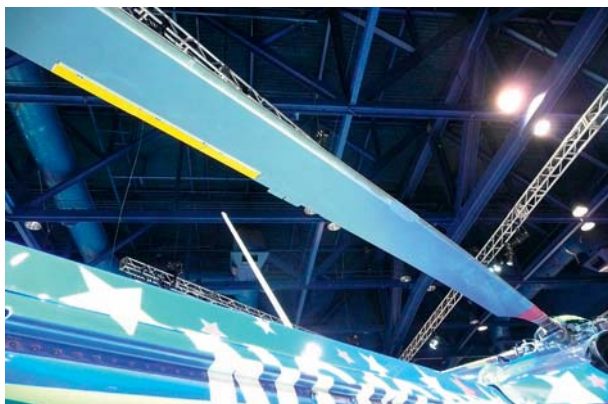
↑ The full-scale mockup of the EC175 in Search and Rescue configuration.

RETROSPECTIVE

# HELI-EXPO 2010

Eurocopter was a major presence at this year's Heli-Expo trade show, presenting its latest innovations and signing a series of new contracts. Read on for all the news from Houston.

## EXHIBITS ON DISPLAY



→ **Blue Pulse**, the active noise and vibration reduction system.



← **The new Blue Edge blade** (see Rotor Journal No.85).



→ **A diesel engine** that may one day equip Eurocopter's light single-engine helicopters.



← **The SARIB system** (see Rotor Journal No.85).

## CONTRACTS

### TWO EC225s FOR VIH →

February 21: Ken Norie, president of VIH Aviation Group in British Columbia, Canada, signed a contract for two EC225s. The helicopters will be operated by HNZ Cougar Helicopters Pty. Ltd., a joint venture created in October 2009 by VIH and HNZ Helicopters in New Zealand to provide services to Australia's offshore market.



### ← AN AS350 B3 ECUREUIL/ASTAR FOR TEMSCO HELICOPTERS

February 23: TEMSCO Helicopters signed a contract for an AS350 B3 Ecureuil/AStar as part of the company's program to upgrade its fleet, which operates in harsh conditions in Alaska. Founded in 1958, the operator mainly performs air ambulance, firefighting and tourist flights.

### AN EC130 → FOR PAPILLON HELICOPTERS

February 21: Papillon Helicopters signed a contract for its 14th EC130. Since 1965, the operator has been carrying approximately 600,000 passengers a year on tourist flights over the Grand Canyon.



### ← EIGHT EC130s AND FOUR AS350 B3 ECUREUIL/ASTARS FOR AIR METHODS

February 24: Air Methods, the world's largest air ambulance operator, signed a contract for eight EC130s and four AS350 B3 Ecureuil/AStars, slated for delivery this year. The 12 new aircraft will be joining Air Methods' current fleet of 330 helicopters that provide emergency medical services throughout the United States. The Air Methods fleet already includes EC130s, EC135s, EC145s, AS350 Ecureuil/AStars, AS365 Dauphins, BK117s and BO105s.



## OTHER EVENTS...



### ↑ RECOGNITION FOR HAITI RELIEF WORK

Accompanied by CEO of Eurocopter de Mexico Serge Durand, a representative of the Dominican Republic presented a commemorative plaque to Eurocopter CEO Lutz Bertling in recognition of the aid provided by Eurocopter to the victims of the earthquake that struck Haiti in January.



### ↑ 30 YEARS OF COOPERATION WITH PEGASO

Eurocopter presented a commemorative plaque to Enrique Zepeda, CEO of Transportes Aereos Pegaso, in recognition of three decades of cooperation between Pegaso and Eurocopter. Created in 1981, Transportes Aereos Pegaso operates a fleet of 18 helicopters, with two additional EC145s slated for delivery this year.

### 30TH EC135 FOR ADAC

The 30th EC135 was delivered to ADAC, a German operator specialized in air rescue missions.



# VISIT FROM THE FRENCH PRESIDENT

**MARCH 4, 2010**

On March 4, 2010, French President Nicolas Sarkozy gave the closing speech of the “États Généraux de l’Industrie”, a high-level industrial conference organized by the French government, at the Eurocopter plant in Marignane. The CEO of EADS Louis Gallois, Eurocopter CEO Lutz Bertling and several members of the Group’s Executive Committee were in attendance to greet the president, who was given a guided tour of the Rotor & Transmissions product center and the Super Puma assembly line, where a Tiger, NH90 and EC175 were on static display. Mr. Sarkozy then gave his closing speech before an audience of more than 1,000 spectators, including industry leaders, government officials and Eurocopter personnel.







© Luis Vizcaino

# VISIT FROM THE KING OF SPAIN

**APRIL 21, 2010**

On April 21, His Majesty Juan Carlos I, King of Spain, made his first official visit to Albacete, the Eurocopter headquarters in Spain. He was accompanied by many dignitaries, including the President of the Autonomous Community of Castilla La Mancha José María Berredá, CEO of Eurocopter Lutz Bertling, and CEO of Eurocopter in Spain Juan Carlos Martínez Sáiz. The king received a guided tour of the only plant in Spain currently manufacturing helicopters. An experienced pilot of the Cougar, Tiger and EC120, he took special interest in the production processes and chatted with the Eurocopter employees at the different workstations.



© Luis Vizcaino



© EC Chile

MARCH 23-28, 2010

► **FIDAE 2010**

The FIDAE Air Show held in Santiago, Chile in March was a resounding success for Eurocopter, which signed contracts with public and private operators in Argentina and Chile for seven helicopters (2 EC135s, 3 AS350 B3 Ecureuil/AStars, 1 EC130 B4 and 1 EC120). Eurocopter also announced the official certification by the Chilean Civil Aviation Authority of the Group's new training center for pilots and technicians. In parallel, two seminars were held to discuss the decisive role played by helicopters in air ambulance and fire fighting activities. To close out the event, AS350 B3 Ecureuil/AStars performed flights to demonstrate their excellent capabilities for fire fighting and law enforcement missions.



© Tharassis Angelou

FEBRUARY 26-28, 2010

► **PROSEC 2010**

PROSEC 2010, the first international trade show for homeland security and protection, took place in Athens. It offered the perfect occasion for Eurocopter to pursue its development strategy in Greece's parapublic market. At the event, Eurocopter presented its equipment packages for law enforcement, fire fighting and coast guard rescue missions to the Greek minister of public order, who took special interest in the comprehensive solution offered by the Group for public service and homeland security operations.

## NOISE AND EMISSION LEVELS

# A Standardized Measurement System

At Heli-Expo 2010, Eurocopter presented the results of a study it performed concerning the implementation of a standardized measurement system for helicopter noise and emission levels. Details below.

ARTICLE: MONIQUE COLONGES

In the life cycle of a helicopter, its operational phase represents nearly 70% of its environmental impact. Since environmental issues are an important topic for helicopter manufacturers, Eurocopter recently conducted a study concerning the use of simple and standardized measurement tools that would be available to everyone in the helicopter industry. Based on the study, Eurocopter is now proposing a system to measure noise levels based on ICAO<sup>(1)</sup> requirements for takeoff, flight and approach phases. Emissions would be measured by calculating the amount of carbon dioxide emitted (based on fuel consumption) per flight hour—unlike the automobile industry, which expresses emission levels per distance travelled. “We chose this option because a simple transport flight from point A to point B only represents 30% of the missions performed by helicopters,” explained Jean-Michel Billig, executive vice-president of Research and Development at Eurocopter. “The other operations, such as aerial utility work or search and rescue missions, are performed in hover flight. Adopting a standardized system to measure the environmental performances of helicopters will be beneficial to both the customer and the planet. The helicopter industry must rapidly reach a consensus in this area so that we can lead the way on environmental issues. Because this system has been specifically adapted to helicopters, it could become the reference for our industry.” For more information, visit [www.bluecopter.com](http://www.bluecopter.com). ■







(1) International Civil Aviation Organization

## ► ENVIRONMENTAL PERFORMANCE LEVEL (NOISE) OF EUROCOPTER PRODUCTS

Model	Noise level
EC120	A
AS350 B2	C
AS350 B3	C
EC130	A
AS355 NP	B
BO105 CB-5	C
EC135 P2+	B
EC135 T2+	B
EC145	A
AS365 N2	C
AS365 N3	C
EC155 B1	B
EC225	C

### Noise Classification

Six different levels have been determined. They are expressed in EPN dB (Effective Perceived Noise Level) or SEL dB (Sound Exposure Level) units.

-  A+: noise level less than or equal to -6
-  A: noise level between -6 and -4
-  B: noise level between -4 and -2
-  C: noise level between -2 and 0
-  D: noise level between 0 and 2
-  E: noise level greater than 2

The noise levels correspond with the required standard level of 0dB determined by the OACI (post-2002 standards).



© Royal Australian Air Force

QUALIFICATION OF THE TIGER ARH<sup>(1)</sup> ➔

# INTERMEDIATE MILESTONE REACHED

At the end of March, two Tigers from the Australian Army completed a firing campaign to successfully reach another major milestone in the Tiger ARH qualification process. This latest success closed out the acceptance and test phase for the weapon system of the ARH version (Hellfire missiles, guns, rockets, countermeasures systems, etc.). The Australian Tiger has now been declared fully operational and has the green light for deploy-

ment outside the country. The milestone was reached right on schedule, thanks in large part to the excellent cooperation between the customer and the Australian Aerospace and Eurocopter teams. The next step is scheduled for October 2010, when the Tiger ARH is to receive its OCH<sup>(2)</sup> qualification to complete development for this version of the Tiger. ■

(1) Armed Reconnaissance Helicopter  
(2) Operationally Capable Helicopter

**SOCCKER WORD CUP**  
**EUROCOPTER SOUTHERN AFRICA IS GETTING READY**

Eurocopter Southern Africa (ESAL) is supporting the country's preparation for the 19th FIFA World Cup, which will take place from June 11 to July 11 in ten different stadiums across South Africa. The South African Police Service (SAPS), with its fleet of nearly 30 helicopters, including Ecureuil AS350, BO105 and BK117, and the SA Air Force, which operates mainly ORYX<sup>(1)</sup> and BK117 among its fleet of more than 40 aircraft, are responsible for securing the stadiums and surrounding air space.

Under the lead of its CEO, Fabrice Cagnat, EASL has arranged a series of special meetings with both operators to better understand and match their needs for the event. Eurocopter will have a specially dedicated stock of spare parts and technicians on hand to ensure the best availability of their aircraft. ■

(1) Locally developed & manufactured PUMA with SUPER PUMA dynamic components and engines

**CANADA**  
**THREE EC130 B4s FOR THE OMNR<sup>(1)</sup>** ➔

Eurocopter Canada signed a contract in early March with the Ontario Ministry of Natural Resources for three EC130 B4 single-engine helicopters. These helicopters will be used for forest fire management work and utility missions across Canada's second largest province. With the delivery of the three new helicopters, the ministry will have a fleet of seven EC130 B4s available for the operating season. "The EC130 has been an excellent addition to our fleet of aircraft," commented Mike O'Brien, general manager of Aviation Services for the Ministry of Natural Resources. "We have used it with great results in many aspects of the ministry's resource management mandate." The use of helicopters enables the ministry to respond rapidly across Ontario's vast northern wilderness, which contains tens of thousands of lakes but very few roads. ■

(1) Ontario Ministry of Natural Resources



© Kevin Middel

# 25,000

The total number of flight hours logged by Government Flying Service (GFS) in Hong Kong with its fleet of Eurocopter helicopters. The current fleet includes four EC155s and three AS332 L2 Super Pumas, which are used for air ambulance, fire fighting, law enforcement and search and rescue missions. In recognition of this major milestone, Eurocopter presented a commemorative plaque to Captain Michael Chan, a GFS controller, who added: "We are extremely pleased with this new accomplishment, which was made possible by the excellent cooperation between GFS and Eurocopter."

## AGENDA

**Over the next few months, Eurocopter and its subsidiaries will be participating in many different air shows and conventions throughout the world.**

**JUNE 8–13, 2010**

► ILA, Berlin (Germany)

**JUNE 14–18, 2010**

► EUROSATORY,  
Paris (France)

**JULY 14–17, 2010**

► ALEA, Tucson (United States)

**JULY 17–18, 2010**

► RIAT, Fairford (United Kingdom)

**JULY 19–25, 2010**

► FARNBOROUGH,  
London (United Kingdom)

**AUGUST 7 AND 8, 2010**

► KECSKEMET,  
Kecskemet (Hungary)

**AUGUST 9, 2010**

► INTERSEG,  
Santa Catarina (Brazil)

**AUGUST 12 AND 14, 2010**

► LABACE,  
São Paulo (Brazil)

**SEPTEMBER 21–25, 2010**

► AAD, Cape Town (South Africa)

**SEPTEMBER 22–25, 2010**

► MONACO YACHT SHOW,  
Monaco

## INTERNATIONAL HELICOPTER SAFETY TEAM A CALL FOR ACTION

In early March, the Chief Executive Officers of Eurocopter, AgustaWestland, Bell and Sikorsky signed a joint letter addressed to all helicopter owners as part of continuing efforts by the International Helicopter Safety Team (IHST) to reduce the number of helicopter accidents worldwide by 80% over the next decade. The letter cites four areas where operators should concentrate their efforts to reduce accident rates: the adoption of Safety Management Systems (SMS); improvements

in training; the use of advanced systems and equipment; and strict compliance with the manufacturer's maintenance program. It should be noted that accident rates are higher for smaller operators, meaning it is vitally important for them to be equally as aware of these issues as owners of larger fleets. To read the letter, go to Eurocopter's website [www.eurocopter.com](http://www.eurocopter.com) and click the tab Safety on the home page, or visit the IHST website ([www.ihst.org](http://www.ihst.org)). ■



## PETROBRAS EIGHT EC225s IN THE SKIES OF BRAZIL

The EC225 has made a stunning entrance in the Brazilian oil and gas market. Petrobras, Brazil's state-owned oil company, is currently benefitting from the services of eight EC225s to perform exploration work in the Tupi oil field recently discovered in the Santos Basin off the southeast coast of Brazil. Five of these helicopters, operated by Brazilian Helicopter Services (BHS), a subsidiary of the CHC group, and Aeróleo, a partner of ERA, have been in service since January of this year. The remaining three aircraft will join the BHS fleet before the end of 2010. The operating contract for the eight EC225s covers a five-year period. ■

## INTERNATIONALIZATION

# Think Globally, Act Locally

Eurocopter has firmly established itself as the world's No. 1 helicopter manufacturer in the civil and parapublic markets thanks to its comprehensive range of products and services. But there is another key to the Group's immense success: the international deployment strategy it has been pursuing since the 1960s. Now, almost fifty years later, this strategy is more important than ever. Eurocopter continues to expand its presence on five continents, driven by one overriding goal: to accompany our clients locally. Read on to learn more about the Group's globetrotting.

ARTICLE: MONIQUE COLONGES







## Think Globally, Act Locally

Eurocopter has successfully developed a two-pronged strategy for its international development: a worldwide network of subsidiaries and an impressive portfolio of partnerships and cooperation agreements founded on innovative work setups.

Eurocopter's network is truly exceptional, and the numbers speak for themselves: More than 20 subsidiaries around the world employ some 3,000 people and manage 60% of the Group's customers. Regularly conducted customer satisfaction surveys have demonstrated the efficiency of this deployment policy: In countries where Eurocopter has set up a subsidiary, satisfaction levels are higher than in those where it has not. Clearly, nothing can replace localized services.

The activities of all Eurocopter subsidiaries are based on three pillars—sales, support and industry—and are adapted to the local context and the Group's worldwide pursuits. These factors are all taken into account when Eurocopter decides to create a new subsidiary. The next member of the family will be created in just a few months in India, where Eurocopter recently signed new agreements with its biggest customer in the country, Pawan Hans (see article, page 17). Two recent events in March demonstrate the crucial role that Eurocopter's subsidiaries play in ensuring the success of international contracts: The 100th UH-72A was delivered to the U.S. Army, and ground was broken on the new building that will house the EC725 assembly line in Brazil. Without the presence of American Eurocopter in the United States and Helibras in Brazil, neither of these contracts would have gotten off the ground. Today more than ever, manufacturing inside the customer country is a must if Eurocopter hopes to win new contracts, which more often than not contain clauses stipulating that certain aircraft components must be built locally to generate new jobs.

The second key to Eurocopter's international deployment strategy is strategic partnerships. Eurocopter has already worked on cooperation agreements with some thirty different countries around the world, and this vast experience is paying off once again for two new programs: the EC175 in China and the KUH<sup>(1)</sup> in South Korea. Both helicopters recently performed their first flights (December 17, 2009, and March 10, 2010, respectively) right on schedule. The EC175 cooperation agreement covers the development, industrialization and series production of an entirely new helicopter. Eurocopter is a subcontractor for the KUH and is also providing technical support to KAI<sup>(2)</sup> during the Korean helicopter's development phase. These two recent successes perfectly illustrate Eurocopter's ability to diversify its offer while also meeting two important objectives: helping its customers achieve success while firmly establishing itself in rapidly developing markets. ■

(1) Korean Utility Helicopter

(2) Korean Aerospace Industries



1 - Laying the first stone of the new building at Helibras that will house the EC725 assembly line

## A strategy based on a worldwide network



2 - Delivery of the 100th UH-72A Lakota



3 - Maiden flight of the KUH





© Eurocopter / J. Deulin

of subsidiaries and unequalled expertise in partnerships and cooperation.

INDIA

## An Increased Presence

Eurocopter and Pawan Hans, India's No. 1 civil helicopter operator, signed two Memorandums of Understanding at the India Aviation Expo in Hyderabad in early March. Read on to learn more about the new agreements.

ARTICLE: MONIQUE COLONGES

The agreements cover the creation of two joint ventures: a Repair and Overhaul center that will be dedicated to the large fleet of Dauphins operating in India and a training center to meet the ever-increasing needs of Indian operators for qualified personnel. Both entities will be opening their doors in 2010. Chairman and Managing Director of Pawan Hans R.K. Tyagi talked about the new deals: "The helicopter market is booming right now in India, and we feel our company has excellent opportunities in the oil and gas, tourism and corporate transport sectors. With the high-quality products and services Eurocopter has to offer, it is the ideal partner to help us offer better services to our customers."

"We have enjoyed excellent relations with Pawan Hans for 24 years now," added Marie-Agnès Vève, who is in charge of Eurocopter activities in India, "and we are delighted by this opportunity to strengthen these ties even further through the creation

of these joint ventures. Our goal is to offer more localized services in India to ensure the best possible support for our customers. Eurocopter currently holds a 30% share of the helicopter market in India, which is a strategic country for the Group." As part of this strategy, a subsidiary will be created in India in the coming months. ■

### ► PAWAN HANS: AN OLD FRIEND

Pawan Hans first began operating Dauphins in 1986, and since then its fleet has totaled more than 340,000 flight hours. The company demonstrated its complete confidence in Eurocopter once again this past March by signing a contract for an additional seven AS365 N3 Dauphins to be delivered in the 12-passenger configuration. These new additions will increase the number of Dauphins operated by the company, used mainly to transport VIPs and government officials, to 33. The Dauphins are also called on to transport personnel to oil platforms and drilling barges.



April was a busy month for the KHP program. The KUH performed its first flight

## KOREAN UTILITY HELICOPTER

# PROMISES KEPT

The Korean Utility Helicopter (KUH) made a stunning entrance into the aeronautics scene on March 10 when its first flight was successfully completed at the exact time and date originally planned. Development work on the new helicopter will continue through 2012.

ARTICLE: ALEXANDRE MARCHAND

The first prototype (PT1) of the KUH successfully completed its initial flight on March 10. It was an auspicious debut for the new helicopter, as March 10 was also the first day of snowfall in South Korea: a sign of success, according to the local tradition! Since this first flight, the Surion, as the helicopter is known in South Korea, has been kept on a busy flight schedule by flight test engineers from the country's armed forces, the Korean Defense Acquisition Program Administration (DAPA) and KAI personnel. "You could sum up the success of the KUH program in two words: promises kept," said Hubert Mantel, the program director for Eurocopter. "This first flight, performed at the originally-scheduled time and date, is but the latest demonstration. We have respected our calendar, budget and performance commitments, and the excellent progress we've made on the KUH has strengthened the

ties between Eurocopter and KAI." It should be noted that the exemplary cooperation between the two companies has been singled out for special mention by the South Korean Ambassador in France. Eurocopter is providing technical support for the development of the KUH and is also manufacturing certain sub-assemblies (automatic pilot, gearboxes, rotor mast, etc.).

"The Koreans can be extremely proud of this program, as they have already made tremendous strides," pointed out Mr. Mantel. "They demonstrated their expertise in the past with the T-50 advanced trainer jet, but a helicopter like the KUH is even more sophisticated. South Korea is right on course to fulfill its goal to become one of the world's seven largest countries in the aeronautics industry by 2020." The PT2 Surion prototype has now begun flying alongside the PT1, and the PT3 and PT4 prototypes will be joining the development and qualification program in June and September 2010, respectively. Although Eurocopter is not directly participating in the flights, its



© Eurocopter / T. Restang

and the DTV was delivered to South Korea.

From March 1 to 12, 2010, four employees from Korean Aerospace Industries (KAI) and two from Eurocopter underwent DTV maintenance training in Marignane. An ETS instructor developed customized training sessions to familiarize the trainees with helicopter maintenance so that they will be able to service the helicopter on their own in South Korea. Each of the participants received a certificate upon successful completion of the courses.



© DR

local technical support team does provide recommendations to help ensure operations run smoothly. Some final adjustments may be required on the helicopter, but the subassemblies sent to Marignane shouldn't require any major modifications. Another important step in the program is the delivery of the DTV (Dynamic Test Vehicle, now to be called the GTV, for Ground Test Vehicle) to KAI following the successful test campaign (see inset).

"When we send the DTV to South Korea, the delivery phase for the actual helicopter components will be completed," explained Mr. Mantel. "But our technical support work will be unwavering until the helicopter obtains its qualification—most likely in 2012." Up to 50 Eurocopter employees at a time have been stationed in

South Korea, but the staff has now stabilized at approximately 25 technicians and engineers. Eurocopter is still looking for candidates to fill vacant positions, however.

KAI is now laying the groundwork for the production launch of the Surion and is looking to obtain the Initial Production Approval by the end of the year. An agreement has been signed between Eurocopter and KAI for the advanced production of the subassemblies for the first 35 helicopters. Eurocopter and KAI are also working on the creation of a joint venture to market the KUH outside of South Korea. Back home, KAI has proposed the development of an attack version (the KAH) and a naval version to the South Korean government. It looks like the Surion has a long and distinguished career ahead of it. ■



© DR

### ► VISIT TO SOUTH KOREA

From April 6 to 8, 2010, the CEO of EADS Louis Gallois and Eurocopter CEO Lutz Bertling travelled to South Korea, where they met with the President of the Republic of Korea, the Minister of the Economy and the Vice Minister of Defense to talk about the successful Surion helicopter program. Mr. Bertling also met with the CEO of KAI to lay the groundwork for a future agreement concerning export and development work on the Surion before attending a luncheon with the Eurocopter Tech Reps working in the country.



© EADS North America

100 helicopters delivered on time, within budget and

► CURRENT DEVELOPMENTS

Several projects are currently being developed to better meet the needs of the U.S. Army. Major improvements include integration of the HUMS<sup>(1)</sup> system (currently in specification phase), hard coated rotor blades, tactical radios, blue force tracker, searchlights, digital maps, mission displays and data link. A flight test campaign in Donauwörth, Germany has also successfully validated a centerline EO-IR<sup>(2)</sup> system installation for the EC145. It was installed for the first time on a UH-72A Lakota last April.

(1) Health and Usage Monitoring System  
(2) Electro-Optical InfraRed



© EADS North America

## LIGHT UTILITY HELICOPTER

# DELIVERY OF THE 100th UH-72A LAKOTA

The 100th UH-72A Lakota was officially handed over to the U.S. Army on March 4, 2010 at the American Eurocopter site in Columbus, Mississippi. For the occasion, *Rotor Journal* takes a look back at this exemplary program.

ARTICLE: MONIQUE COLONGES

the required quality standards.

During the ceremony held to commemorate the 100th Lakota delivery, Marc Paganini, president and CEO of American Eurocopter, reminded the attendees that the very first Lakota was delivered just over three years ago in November 2006. This is an impressively short time for Eurocopter to successfully launch a major new program, build a new plant, transfer manufacturing from Germany to the United States and deliver 100 helicopters on a predefined schedule while adhering to strict quality and cost requirements. Five of the helicopters were delivered to the U.S. Navy and are currently being operated at the Patuxent River training academy to train test pilots from the U.S. armed forces and allied countries. By early March, the UH-72A Lakota fleet had already totaled more than 25,000 flight hours, with availability rates of over 90%. In addition, more than 500 pilots and 200 technicians from the U.S. Army received training at American Eurocopter's site in Grand Prairie, Texas.

The U.S. Army plans on acquiring a total of 345 UH-72A Lakotas by 2016. So far, 187 orders have already been received, including eight just recently. The helicopters are used for medical evacuation and search, combat training and rescue missions, to help fight the war on drugs and for VIP transport.

"The Lakota program has accomplished what no other major program has ever done before," said Rusty Weiger, deputy director of the U.S. Army Aviation program. "Costs and lead times have been respected, and we can now affirm that these performances have become the program norm." ■



## ► MADE IN THE USA

All assembly work, customization, ground and flight testing as well as tail boom production and retrofit of mission equipment for the UH-72A Lakota is now performed in the United States at American Eurocopter's plant in Columbus, Mississippi, where up to five Lakotas currently roll off the line each month. The plant is now fully operational and is home to no fewer than 250 employees working on the program, just as initially planned. "Thanks to the excellent cooperation between the Eurocopter teams in Europe and here at American Eurocopter, know-how was transferred in the best possible conditions under tight deadlines," summed up Reinhard Schuch, who is in charge of the program at Eurocopter. "The program has been an immense success."



A comprehensive program for Helibras, which plans on doubling its production capacity.

HELIBRAS

# EC725 Program Gets Underway in Brazil

The EC725 is expanding its horizons: Production has officially been launched in Brazil for the 50 helicopters ordered by the Brazilian Armed Forces, offering further proof that Helibras is firmly committed to obtaining the industrial capacities it needs to develop, manufacture and ensure support for the tactical transport helicopter.

ARTICLE: BELÉN MORANT

Helibras, Eurocopter's subsidiary in Brazil, is now poised to take on a major challenge, as it has been tasked to provide the Brazilian Armed Forces with 50 EC725s<sup>(1)</sup> ordered in December 2008. The contract represents the third largest export order in Eurocopter's history, and includes technology transfer requirements that, over time, will result in the production of EC725s that are 100% "Made in Brazil". History tends to repeat itself: 30 years ago, Eurocopter signed a similar agreement for the production of the Esquilo<sup>(2)</sup>.

## ► TESTIMONY

"The new contract signals a clear commitment to Brazil's manufacturing sector because 50% of the added value will be generated in Brazil. We will be setting up major design capabilities in order to develop the different versions and options for the EC725. To do so, we will need to import technologies and skills from France that are not currently available on the Brazilian market. The technology transfer between the two countries has already gotten off to a great start."

*Eduardo Marson,  
President and CEO of Helibras*

As scheduled, a groundbreaking ceremony was held on March 19 at the Itajubá plant, which will be housing new 11,000 square-meter Helibras facilities for the EC725 design, production and support functions. Helibras already has 14,000 square meters available at its main headquarters. The new facilities are to be built over an 18-month period, with final delivery slated for the end of 2011. At the same time, the first three EC725s for Brazil will be assembled at the Eurocopter plant in Marignane and delivered during the year. Helibras will be directly involved in the production work and, in particular, test and support activities as it has extensive know-how in these areas. Assembly work should begin on the EC725s in Itajubá in early 2012, with deliveries continuing through 2016. Local production of the EC725 will provide Helibras with the opportunity to acquire the industrial capabilities it needs to manufacture and promote other Eurocopter products over the long term, such as the EC225 (the civil version of the EC725) for the region's oil and gas market. Helibras will be doubling its production capacity, which is excellent news for the local workforce. The number of employees at the company will jump from 350 to 700. ■

(1) Two EC725s in VIP version and 16 helicopters (8 for troop transport and 8 for special forces) for each branch of the armed forces

(2) Name of the Ecureuil/AStar in Brazil

## RETROFIT

# FIRST FLIGHT OF THE CH-53GA

On February 10 in Donauwörth, Germany, 150 guests were on hand to witness the maiden flight of the CH-53GA medium-lift transport helicopter. The flight was but the latest success in the overhaul contract signed three years ago between the BWB<sup>(1)</sup> and the Eurocopter German Army Helicopter Maintenance Center.

ARTICLE: STEPHANIE POTRATZ

“The program to upgrade the CH-53 was launched by the German Army in order to modernize 40 of the Bundeswehr’s 80 CH-53Gs, which have been providing excellent service for 30 years now,” explained Ralf Barnscheidt, who is in charge of government customers for Eurocopter in Germany. “The goal of the program is to extend the service life by 20 to 30 years of the CH-53, which has been the true workhorse for the German Army Air Corps for many years now. The helicopters also have to be adapted to the ever-increasing complexity and diversity of missions that the Bundeswehr is called on to perform.” The first training flights are slated for early 2011, with the first delivery to the German Army scheduled that same year. The overhaul work will begin its pro-

duction phase in Donauwörth between 2011 and 2013.

The CH-53GAs are used to transport troops and equipment for a wide range of military operations, notably in Afghanistan. “Beginning in 2012, the CH-53GAs will be providing support to German forces for international missions. The new version will be used in joint missions with the UHT Tiger and the NH90,” said Mr. Barnscheidt.

### Fully Optimized Upgrades

To ensure that the CH-53GA will be fully operational for its various missions, important functional requirements were clearly defined and seamlessly integrated on the machine. The flight controls and displays have been upgraded by intro-

ducing a cutting-edge digital avionics system, and the CH-53GA has been equipped with a new autopilot that offers automatic stabilization in hover flight. The helicopter’s new communication equipment will also facilitate joint missions with the Tiger and NH90. Another important improvement is a modern self-protection system that guarantees improved safety. “This first flight demonstrated even further the excellent capabilities of Eurocopter’s industrial competence center in Germany,” summed up Mr. Barnscheidt. “This overhaul program is one of our most important projects and we are very proud to be working on it.” ■

(1) Bundesamt für Wehrtechnik und Beschaffung:  
Federal Office of Defense Technology and Procurement



### ► PILOT TESTIMONY

“A major strength of the CH-53GA is the new flight control system (4-axis autopilot), offering automatic approach procedures and controls. In the latest test flights, we also tested two new “upper modes” (“auto hover” and “low speed” modes) that significantly reduce the pilot’s workload – in particular for transport missions.”

*Lieutenant Colonel Hans Pfeffer,  
BWB test pilot*

Simulating close-to-real-life operational situations in mountains, urban areas and over water meets the increasing demands of private and government operators who perform these types of missions.



HELISIM

# A “MUST” FOR RESCUE MISSIONS

So much goes into a successful search and rescue (SAR) mission that it remains one of the most complex operations that civil and military operators are called on to perform. This is just one reason why Helisim prides itself on meeting the most specialized needs of rescue crews thanks to its top-quality training services and the new display systems it will offer beginning in June 2010.

ARTICLE: CHRISTIAN DA SILVA

The acronym SAR represents a large array of rescue missions. Sea rescue missions may be the first that come to mind, but they are just one of many, as rescue crews are also called on to help aircraft in emergency situations both at sea or on land. Crews also have to handle increased workloads in the majority of these types of missions, as the helicopters must fly close to the ground and the operating environment can involve many different factors. “We mainly simulate rescue operations involving hover flights over water, but we can also confront trainees with many other situations, such as rescue operations on land

involving obstacles in both day and night conditions. Of course, we also simulate the evacuation flight back to the hospital (medical flights), which is normally the final phase of such missions,” explained one of Helisim’s instructor pilots.

In simulation training, the trainees are forced to deal with many technical and operational problems that test their teamwork skills. A wide variety of challenges, from the most simple to the most difficult, are introduced to force flight crews to optimize their task management and improve their decision-making process.

No one does this better than Helisim through its expert staff of instructors, who put their years of experience in the civil and military





sectors at the service of its customers. The center also offers some of the most modern simulation tools in the world. In the second half of 2010, Helisim will be providing its government customers with a new display system that generates high-definition images unequalled in the field. In addition, Helisim will be introducing new tactical simulation tools to improve combat search and rescue (CSAR) training in both day and night conditions.

### Full Simulation Capabilities

The possibilities have become almost limitless: Users may, for example, simulate an infiltration in enemy territory with support from “RESCORT” helicopters in extreme weather conditions, and the most unex-

pected technical-operational situations imaginable can then be introduced. “With our current simulators, we can already recreate extremely complex missions,” stressed the Helisim instructor. “They include multiple constraints and unexpected events that the flight crews must learn to deal with in order to officially be considered combat ready, based on their own predetermined criteria.”

pected technical-operational situations imaginable can then be introduced. “With our current simulators, we can already recreate extremely complex missions,” stressed the Helisim instructor. “They include multiple constraints and unexpected events that the flight crews must learn to deal with in order to officially be considered combat ready, based on their own predetermined criteria.”

The NH90 simulator already includes the SETHI tactical generation system, which constantly integrates various human and material “entities” (ground vehicles, ships and aircraft), both mobile and stationary, so that complex operating environments can be recreated. The movements of ships,

vehicles and aircraft are simulated with unparalleled realism, while at the same time all of the helicopter’s combat systems can be activated and simulated to deal with ground/air and air/air threats.

Helicopter operations in urban areas are always tricky because of the many obstacles that must be avoided (antennas, power lines, etc.). Helisim has developed a high-definition urban backdrop for these special missions, and also can offer simulation flights in medium and high-altitude mountain areas.

In these complex environments, a variety of different scenarios can be reenacted in close-to-real-life detail so as to immerse the trainee in the mission of his choosing: law enforcement and military operations, VIP transport, and medical evacuation are but a few examples.

Regardless of the setting—from the flat expanse of urban areas to jutting mountain peaks—all possible types of environmental factors that make the pilot’s task all the more difficult during approach flights can be integrated in the simulation (dust, snow, strewn rocks, scrub vegetation, sloping terrain, etc.). An image database has been developed for each environment to offer

displays not only for VFR<sup>(1)</sup> operations, but also in infrared and optronic mode.

Flight crews must nowadays master a wide range of technical and operational skills to perform these complex missions both day and night, over sea and land, in all weather conditions and on all five continents. In addition, the helicopters themselves are becoming more and more sophisticated. “Simulation tools have become crucial for flight crew training,” concluded Helisim CEO Alain Salendre. “They play a key role in helping crews maintain their qualifications so that optimum flight safety can be guaranteed, and this is especially true for SAR and CSAR missions.” ■

(1) Visual Flight Rules



## Valérie André

On February 16, 2010, the EC725 Full Flight Simulator played host to a very distinguished figure in French military aeronautics. The French Army Air Corps offered a simulation flight to Médecin Général Inspecteur<sup>(1)</sup> Valérie André to thank her for the pivotal role she played in developing the medical evacuation capabilities of helicopters in war zones. Ms. André was able to get a first-hand look at the extraordinary technical qualities of the EC225 and EC725 that make the helicopters perfectly adapted to SAR and CSAR missions. Born in 1922, Valérie André was the world’s first female helicopter pilot to fly in a theater of operations. She is also a specialist in military medicine. She will go down in the history books as the “inventor” of medical evacuations via the helicopter. She logged 4,200 flight hours in 496 combat missions. Working alone in her helicopter in Indochina and then with a flight crew in Algeria, Ms. André brought back hundreds of wounded from the front.

(1) A high-ranking official in the French Army medical corps

FINLAND

# First Rescue Missions for THE NH90

In addition to their military duties, the new NH90s operated by Finland's Air Force have also been lending a helping hand to the Finnish Border Guard, performing civil search and rescue (SAR) missions.

ARTICLE: RÉGIS NOYÉ



© Eurocopter / Benoit Villiefeu

The helicopters were placed on round-the-clock operational alert on January 1, 2010, and it wasn't long before they successfully performed their first rescues in difficult operating conditions. The NH90 teams had undergone extensive training before carrying out their first actual missions in the field, missions that demonstrated both the helicopters' operational capabilities and the excellent preparation of the Finnish crews.

As of the end of April, the NH90s had already completed four SAR missions. Two of these operations, which were flown out of the helicopters' home base in Utti, were of special note.

For the first rescue, the NH90 crew flew 30 minutes to Lake Saimaa to save an air-

plane pilot who had performed an emergency landing on the frozen surface of the lake. The second mission was to save a severely injured snowmobile accident victim near Kuopio, in the center of the country. The flight was performed at night, and the victim had to be located in a vast search area. The NH90 crew was able to find the man using its night vision goggles (NVG) – and none too soon, as the man's body temperature had dropped to 30°C by the time he reached the hospital.

These successful missions were very encouraging news both for Eurocopter and the Finnish Air Force, as they demonstrated that all their hard work has paid off and that the NH90 is perfectly suited to fill one of its primary roles in Finland. ■



© Eurocopter / Benoit Villiefeu

Two rescue operations flown out of the Utti base in Finland demonstrated the NH90's capability to successfully perform this type of mission.



EC145

# A Successful Inlet Barrier Filter

Since it was first introduced in 2008, the EC145 inlet barrier filter has been a big hit with pilots, maintenance centers and operators in both the military and civil markets.

ARTICLE: MONIQUE COLONGES

The Eurocopter-patented inlet barrier filter is comprised of two separate systems (one per engine) and a high-performance filter that protects the air intakes of the EC145's engines from sand, dirt, potential causes of foreign object damage (FOD) and corrosion. The filters offer an efficiency rating of more than 99%, which substantially reduces the amount of required maintenance and repairs. The filter itself is made of a special fabric that is soaked with a binding agent and can trap all airborne particles regardless of the operating environment and flight conditions. It is easy to clean with readily available cleaning agents and can be reused time and time again.

The EC145 inlet barrier filter also includes a visual alarm on the instrument panel that is activated if filter deterioration occurs up to a certain extent. Should a second pressure drop limit threshold be reached, an audio warning will notify the pilot, who can then bypass the clogged filters so that unrestricted airflow can reach the engines. In compliance with Eurocopter's safety policies, the pilot's workload is reduced in emergency situations, such as engine failure, because the system is automatically deactivated.

This innovative inlet barrier filter has been successfully tested by several customers (see *inset*), including the U.S. Army and the French Civil Defense. ■

## ▶ CUSTOMER TESTIMONIES

"Our experience with the use of the filters has so far been very positive. Compressor erosion and FOD were big concerns, but we feel that our erosion issues have been solved. In addition to the extension of compressor life, we are noticing much cleaner engine oil and air systems. One concern we had was how the installation of filters would affect engine performance. We have noticed no measurable change in available power. From a pilot's point of view, the system is easily managed and requires little attention."

*Stan Wedell,  
Maintenance Director  
at Travis County Star Flight  
(USA)*

"Operating on Long Island, NY, we work in a sand ridden environment. We are very happy to have had Eurocopter's new system retrofitted on our EC145 helicopter. We are now able to perform Medevac operations on our barrier beaches, which were not possible prior to the installation."

*Sergeant Brian Barrett,  
Suffolk County Police  
Aviation Section (USA)*

## NATURAL DISASTERS

## WHO CAN YOU TURN TO?

Over the past few months, a series of natural disasters left devastation in their wake at different points around the globe. In Haiti, Chile and Peru, emergency crews were called on to provide urgently needed help to victims, and the helicopter often proved to be the only means of getting people out of tight situations.

ARTICLE: BELÉN MORANT



◀ The AS532 AL Cougars of the Chilean Army played an essential role thanks to their multi-mission capabilities and wide range of optional equipment (hoist, night vision system, medical transport configuration) and also provided excellent operational support. With its carrying capacity of more than two metric tons, the Cougar clearly demonstrated that it offers an effective response to natural disasters.



## CHILE

On February 27, 2010, an earthquake measuring 8.8 on the Richter scale struck Chile and unleashed a devastating tsunami. The helicopter was the only means of reaching many affected areas as the transportation infrastructure was completely destroyed in the disaster.

Eurocopter helicopters operated by the Army, law enforcement agencies and private operators actively participated in the relief efforts. The Chilean Army provided two Ecureuil/AStars, one Super Puma and four Cougars to perform liaison mis-

sions and to transport food and troops. The army's helicopters performed a total of 561 missions totaling 698 flight hours, during which they transported 1,871 people and 193 metric tons of goods.

The Chilean Navy also provided a helping hand. Its AS365 N2 Dauphins and AS332 F1 Super Pumas transported more than 200 metric tons of goods from frigates to coastal regions struck by the quake. The Carabineros of the Chilean national police force also performed night patrols in their EC135s equipped with

night vision systems.

The search & rescue (SAR) crews of the air wing of the Chilean Investigation Police completed 60 flight hours with their AS350 B3 Ecureuil/AStars, transporting canine SAR teams and specialists, police officials and other personnel. To reach the most isolated villages, the Helicopter Association of Chile (ACHHEL) organized a joint operation with various civil operators to perform airlifts with a wide range of helicopters that included BO105s, EC120s, EC130 B4s and EC145s. ■



## PERU

Last January, tourists at Machu Picchu lived a true nightmare after torrential rains caused landslides that left thousands stranded at the site. Rail services to the nearby town of Cuzco were cut off and even access by foot was impossible. The helicopter proved to be the only means of carrying the victims safely back to town.

The local operator Servicios Aéreos de Los Andes rose to the occasion, demonstrating its efficiency as it brought down 75 people from the mountain and transported 350 kg of goods and food supplies with one of its AS350 B3 Ecureuil/ASStars. The helicopter performed a total of 18.5 flight hours. ■

## HAITI

On January 12, 2010, an earthquake that registered 7 on the Richter scale struck just 15 km from Port-au-Prince. More than 200,000 people are thought to have died in the catastrophe. The international community was quick to respond and many government agencies and private organizations immediately sent help. Communications networks in the country were in shambles, and it quickly became evident that the helicopter was the most effective means of transporting goods and relief workers to the regions in most desperate need.

Eurocopter immediately sent two Ecureuil/ASStars (an AS350 B and AS355 F2) via its Mexican subsidiary (EMSA) to support humanitarian missions in Haiti. Aviajet was responsible for organizing the relief efforts, and the Air Force of the Dominican Republic offered the services of its pilots. The two helicopters flew six to seven hours a day, seven days a week, and logged a total of more than 150 flight hours.

Helicopters from Brazil also participated in the rescue work. On January 28, the Brazilian Navy sent an AS332 Super

Puma and an AS350 BA Ecureuil/ASStar to Haiti for a full month to provide humanitarian aid. The helicopters were used to transport communications equipment, the wounded, medical supplies, food, water, and clothing for victims, as well as Brazilian troops. ■

The two Ecureuil/ASStars operated by Aviajet spent four weeks performing rescue missions. In the course of 44 round trips between Santo Domingo and Port-au-Prince, the helicopters transported 157 wounded, medical personnel and government officials and five tons of water, food supplies and medical equipment.



## RESCUE MISSION

# Air Lift to Hiddensee



For several days, tourists were stranded on the island of Hiddensee in the Baltic Sea after a severe winter storm struck the German federal state of Mecklenburg-Western Pomerania, creating havoc in the coastal region and on the nearby islands of Rügen and Hiddensee. As the situation worsened, tourists had to be evacuated to Rügen, while food and medical supplies were transported by helicopter to Hiddensee.

ARTICLE: STEPHANIE POTRATZ

Hermann Günnewig, a pilot for the operator FJS-Helicopter Lufttransport, performed seven rotations with an AS350 Ecureuil on the morning of February 2, carrying half-a-dozen tourists during each trip. The rescue mission had to be interrupted prematurely at around 1 p.m. due to weather conditions, but not before Mr. Günnewig had evacuated 40 of the 100 stranded tourists from the island. "Navigation was no problem because we were equipped with GPS and the Moving Terrain system, and we also know the terrain very well," explained the pilot. "The helicopter's particle separator helped us avoid any problems due to swirling snow during takeoff and landing." Mr. Günnewig's day was hardly over. After carrying the tourists to safety, he also provided other vital services for the district of Rügen, such as conveying around 500 kilograms of food and medical products, evacuating an expectant mother and a newborn, and transporting medical personnel. "We were able to quickly transform the helicopter into its passenger configu-

ration," said Mr. Günnewig. "Carrying five people, which represents a load of about 500 kilograms, was no problem for a high-performance machine like the Ecureuil."

### The Only Option

The Eurocopter helicopter stationed in Schwerin-Pinnow is normally used for medical evacuation and rescue missions, but when the snow and ice began piling up, it proved to be the only option available. The situation reached crisis point after the Hiddensee ferry, the only boat capable of breaking the ice, was unable to deliver its final load of provisions due to an engine failure. An icebreaker had made several attempts to free a pathway to the island surrounded by an ice sheet up to 40 cm thick, but without success. Once the ferry traffic had been suspended indefinitely, only the helicopter could provide a lifeline to the island. The Ecureuil certainly rose to the occasion: "The Ecureuil is an incredibly reliable machine, and it met the challenges of this difficult mission without a hitch," summed up Mr. Günnewig. ■

### *And in France...*

The helicopters of the French Army Air Corps, Civil Defense and Gendarmerie came to the rescue of scores of victims after the violent windstorm Xynthia battered the Atlantic coast of France in late February, 2010.





## 3,000 FLIGHT HOURS

The Gendarmerie has already logged 3,000 flight hours on its EC135s since the first helicopter arrived in April 2009. Each helicopter is expected to fly approximately 450 hours a year, for a yearly fleet total of 5,400 flight hours. The 400 and 800-hour inspections will be performed on-site by Eurocopter technicians through February 2011. The airframes and engines are also covered by an in-service support contract (MOC<sup>(1)</sup>) to guarantee their availability.

(1) Maintenance in Operational Condition

### FRENCH GENDARMERIE

# POISED TO MEET THE FUTURE

All twelve EC135s ordered by the French Gendarmerie have now been delivered, and France's "flying policemen" are clearly delighted.

ARTICLE: ALEXANDRE MARCHAND

From April 2009 to February 2010: Not even one year was needed for Eurocopter to deliver all twelve EC135s ordered by the French Gendarmerie to replace an initial group of Ecureuils operated by its airborne units. The new helicopters are now serving nine different operational bases in France, and are also being used by the Flight Safety and Instruction Unit (GISV) and the GMCO, the unit responsible for insuring continued operability of the Gendarmerie's helicopters. All the new machines have been qualified to the same standard, and can be equipped with a FLIR Wescam MX-15i camera, a hoist, a boom for quick-descent ropes and a Spectrolab

SX16 searchlight. The EC135s have also been equipped with an ECS<sup>(1)</sup> image transmission system to send FLIR images in real time to ground stations.

"Our helicopters have state-of-the-art equipment, and our crews are delighted with their excellent flight quality, reliability and high-performance avionics," said Major Bloy, who is in charge of the Design and Test Office at the Gendarmerie's national air training center (GCFAG).

The EC135s are used for a wide range of public service missions, such as surveillance, police investigations, search operations and law enforcement, as well as for rescue work and special operations. "The

new hoist, boom and increased cabin space have really broadened the scope of our missions compared with the Ecureuil," explained Major Bloy. "The EC135 also can be used effectively alongside the EC145, which fills a dual role for the Gendarmerie: mountain rescue work and joint missions with the Gendarmerie's special units and the French national police."

After 25 years operating single-engine Ecureuils, the French Gendarmerie has now been equipped with a twin-engine helicopter that will keep it prepared for all its missions in the decades to come. ■

(1) Enterprise Control Systems, UK



© Nicolas Gauthier



© Nicolas Gauthier

2010 WINTER OLYMPICS

# A GOLD MEDAL PERFORMANCE

Helicopters were called on to perform an unprecedented number of missions at the 21st Winter Olympic Games in Vancouver. The long list of duties they performed includes aerial camera work for broadcasting, medical emergency services, passenger transport and a wide range of technical flights.

ARTICLE: RÉGIS NOYÉ

Many of the helicopter missions performed were a real test, requiring not only the best from the machines but also exceptional levels of expertise from flight crews, pilots and operators. Excellent flying skills and knowledge of the terrain were essential – failure was not an option and the challenges were many. Tension rose with the importance of the event, compounded by high altitudes and changing weather conditions. It was particularly important to local operators to not let any of their extra duties interfere with ongoing services to long-standing customers in the area.

The true unsung heroes – the helicopters – demonstrated their full range of operational capabilities to ensure their presence would go unnoticed by the approximately three bil-

lion television spectators around the world. Eurocopter helicopters played a major role in many operations, in particular, the single and twin-engine Ecureuil/ASStars of two local companies: Blackcomb Aviation and Talon Helicopters. Both operators are major players in the area. The Ecureuil/ASStars demonstrated yet again their exceptional flexibility and top-quality performance levels, such as the single engine's excellent rate of climb and the OEI (One Engine Inoperative) power rating of the twin-engines.

## Preparing the Terrain

In addition to the services provided for the Games themselves – which required confidentiality clauses with the organizers – a great deal of helicopter work was performed in the weeks and months leading up to the

Games. Contracts were signed with many different operators 18 to 24 months prior to the opening ceremony. The different operators involved logged several hundred flight hours, mainly to install technical facilities in the mountains. Relay antennas and radars were erected and fuel reserves were delivered for electrical generators. A great deal of sling work was also performed, sometimes with cable lengths of up to 50 meters. Additionally, preparations had to be made to handle all types of rescue operations with hoists (Class D flights).

During the games, security for the entire air space was controlled by the Canadian Mounted Police and the Canadian Armed Forces. Only aircraft under contract with predefined flight plans approved by the authorities were granted access. ■



GALILEO

# First Use with Helicopters

As part of the MAGES<sup>(1)</sup> European research project, Eurocopter and Funkwerk Avionics successfully completed the first EC145 flight operating in the GATE<sup>(2)</sup> environment. The goal of the flight, which was conducted in Berchtesgaden, Germany, was to demonstrate the advantages offered by the EGNOS<sup>(3)</sup> and Galileo navigation systems for rescue services.

ARTICLE: STEPHANIE POTRATZ

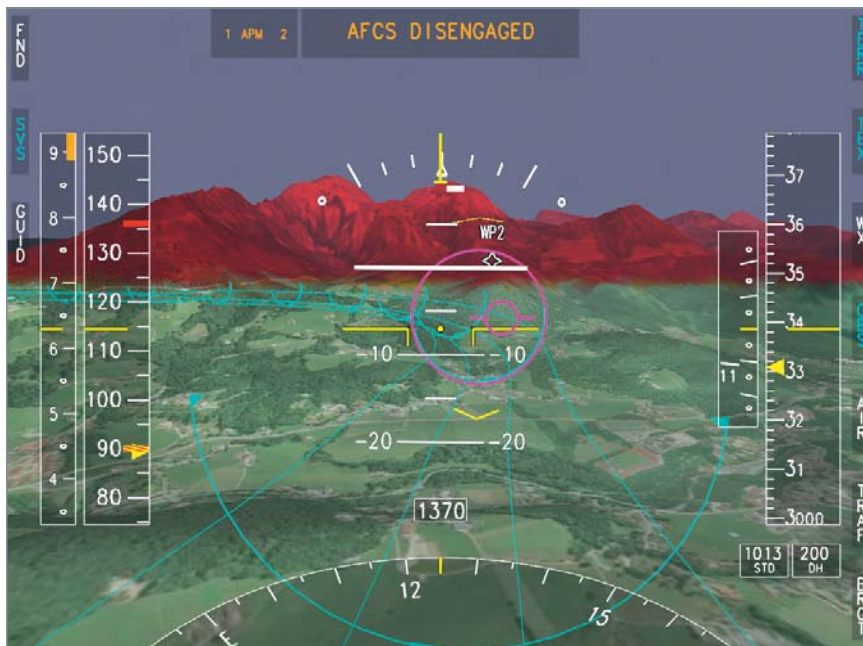
Reliable navigation sources are a must for any aircraft, especially in difficult weather conditions. The Galileo satellite positioning system, scheduled to be operational by the end of 2013, will provide flight crews with extremely reliable and precise positioning signals. It will be the first navigation system operating independently of the American GPS service but will nonetheless be compatible. The capabilities already exist to transmit Galileo signals in the area covered by the GATE test platform to determine a position. GATE is a ground-based radio navigation system

that transmits simulated Galileo signals via six transmission antennas that have been erected on different mountain peaks in the test zone. On November 6, 2009, Eurocopter performed a test flight with an EC145 equipped with EGNOS and Galileo receivers. "During the test flights, we were not only able to receive the six satellite signals and use them to precisely identify a position, but also to simulate the failure of one of the satellites," explained Eurocopter Project Manager Stefan Haisch. The Safety-of-Life warning service offered by Galileo significantly improves

the reliability of the GNSS<sup>(4)</sup>, and opens the door to many new navigation solutions. "In the future, it will be possible to receive independent, redundant signals from both GPS and Galileo," continued Mr. Haisch. "For rescue flights, we will probably be able to rely on the GNSS signal alone. But if a failure should compromise the availability of one of the two systems – due to heavy fog, for example – we'll be able to use the other system for navigation."

## Increased Safety with New "Tunnel-in-the-Sky" Display Concept

In addition to the flight test for data acquisition, an HEMS<sup>(5)</sup> scenario was recreated with the EC145. The simulated signals, which are almost identical to those transmitted by Galileo, were used to validate the experimental flight display concept developed by Eurocopter. This new technology provides the pilot with a computer-generated view of the landscape (see illustration). Mr. Haisch talked about some of the advantages: "The guidance cues provided by the tunnel-in-the-sky synthetic vision system can direct the pilot through the mountains in complete safety right to the landing area. The pilot can also couple this system with the 4-axis autopilot so that the helicopter automatically follows a predefined flight path." ■



The simulated signals were used to validate the "Tunnel-in-the-Sky" technology, which provides the pilot with a virtual landscape. This experimental flight display developed by Eurocopter guides the pilot, in total security, through the mountainous terrain to his destination.

- (1) Mature Applications of Galileo for Emergency Services
- (2) Galileo Test and Development Environment
- (3) European Geostationary Navigation Overlay Service
- (4) Global Navigation Satellite System
- (5) Helicopter Emergency Services

HOVERFLY

# WHEN PASSION TAKES FLIGHT

Interview with Saturnino De Cecco, president of Hoverfly  
and owner of the pasta brand “De Cecco”.

ARTICLE: HOVERFLY





Hoverfly selected the AS355 Ecureuil for its multi-mission capabilities and the AS365 Dauphin for its speed, excellent passenger capacity and cost.

### Can you tell us a little about your company (history, missions, future plans)?

**Saturnino De Cecco** ▶ We are happy to



see that Italian companies are beginning to invest once again in new courageous and original initiatives. Specialized in public transportation, Hoverfly, the leading helicopter company in our country, is certainly one of them. Founded in Pescara, the current location of its main head-

quarters and operational base, Hoverfly was born out of the passion for flying that I share with my good friend, pilot and Vice President of Hoverfly, Cesare Lanza.

Hoverfly's goal is to make sure potential customers are aware of the safety, secu-

rity and versatility offered only by helicopters, which is especially important in a country as geographically diverse as Italy. Due to the vast layout of our country, we had to open four bases for Hoverfly: one in the north near Milan, two others in Rome and Pescara in the center of Italy and the last base in Porto Cervo on the island of Sardinia, one of the most popular islands in the Mediterranean.

Hoverfly is the result of turning a passion into a profession, which we believe to be an important element in the success of any business venture. Our passion for helicopters and our knowledge of the industry allow us to understand the needs of our customers. This has helped us to build a strong business and will continue to help us in the future.

### Why did you decide to purchase helicopters from Eurocopter?

**S. De C.** ▶ The fleet was the main topic

of our evaluation and we were also influenced by our personal experience as pilots. The final decision was made when drafting our business budget, and in the end we settled on twin-engine machines. We chose both the Ecureuil AS355 for its versatility and the Dauphin AS365 for its speed, passenger capacity and price.

### What do you expect from Eurocopter in terms of support and services?

**S. De C.** ▶ In Italy there is still a lot of work to be done in this sector and we are convinced that the potential profit margins are great. This is why we have taken an important first step by choosing Eurocopter, a leader in its domain and world renowned for its products and stability, proving itself yet again with high sales figures and turnover in 2009. Therefore, we consider Eurocopter as the ideal partner in this long journey—this beautiful and fascinating flight toward the future. ■



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