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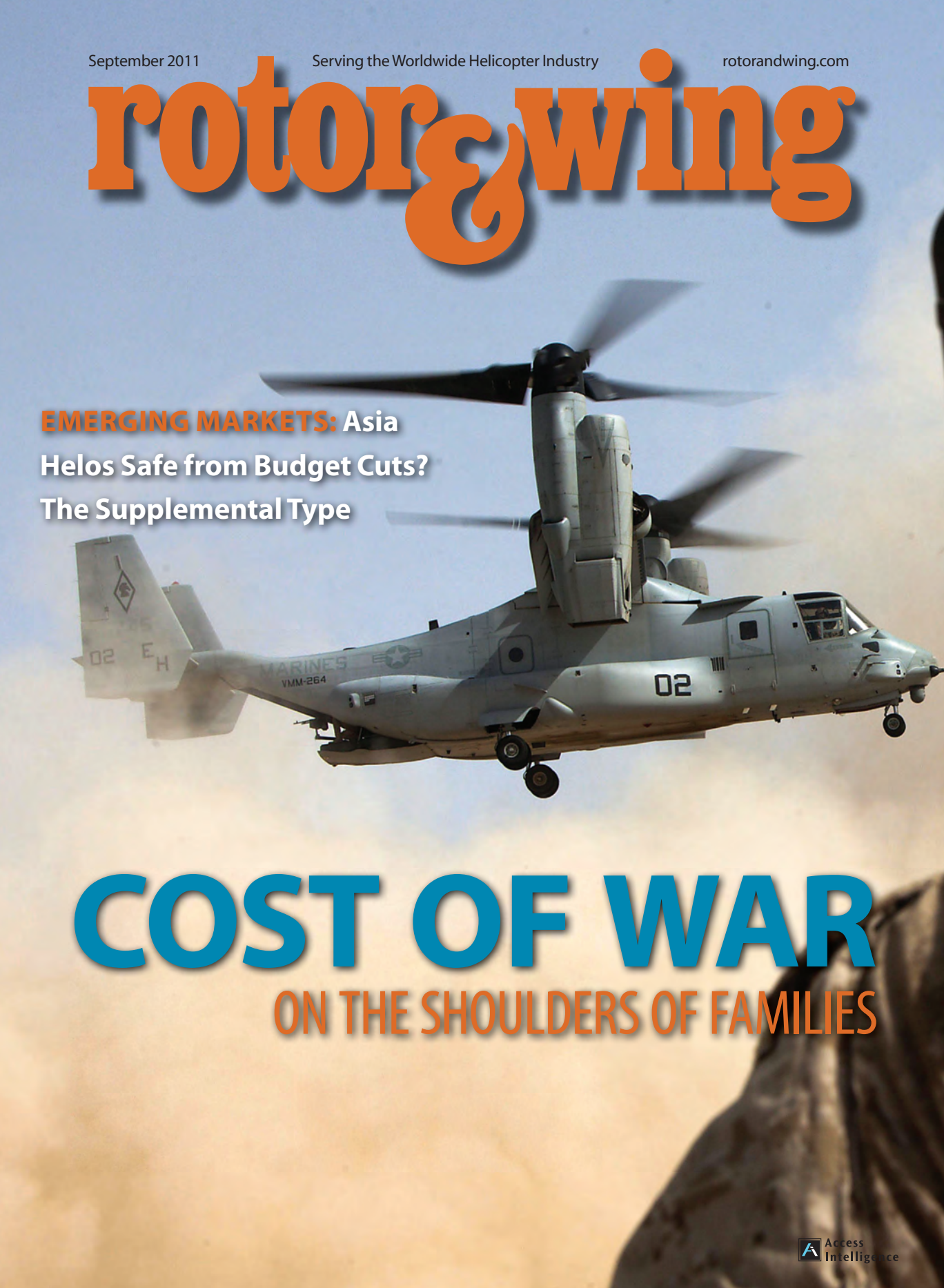

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Editor's Notebook

Carrying the Weight

aparker@accessintel.com

By Andrew D. Parker

With the web transforming the frequency of the news cycle from daily/weekly to hourly/by-the-minute updates in recent years, it's easy to miss—or filter out due to information overload—significant events. It's impossible to follow all the world's news in a single day, let alone actually think about it. The downing of a U.S. National Guard Boeing CH-47D Chinook on Aug. 6 in the Wardak province of Afghanistan is a significant event, but not just because of the loss of 30 U.S. and eight Afghan troops on a military, strategic or national level (see *Military Insider*, "*An Inevitable Casualty of War,*" page 52).

It's important because it marks the loss of 38 fathers, husbands, sons, brothers, cousins and friends. Families bear the largest burden of war. Long after this story fades from the headlines and is forgotten by the collective consciousness, these 38 families will continue to feel the impact of losing a family member before their time.

"After a decade of combat our soldiers are tired," noted Maj. Gen. Anthony Crutchfield, the commander of U.S. Army Aviation, as part of a speech about the hidden costs of war on military families during Quad-A earlier this year (See "*Fighting is a Family Thing*," April 28, 2011 *Military Insider*, at **www.aviationtoday.com/rw/military/attack/73128.html**).

Wherever your personal beliefs lie in regards to the Afghanistan war, it's important to honor these 38 individuals by taking a moment to pause and reflect on their lives, which is why I'm dedicating half of this column to the 30 names released by the Department of Defense. While the lasting effects of losing highly trained SEAL operatives is ultimately a temporary setback to the U.S. military, it pales in comparison to the impact felt by the wives, mothers, sisters, brothers and other family members who have lost their husband, son or brother.

Do me a favor: Take five minutes and read these names aloud, whether by yourself or to family and friends. Take a moment to explain to the young ones why it's important to recognize the sacrifices military personnel—and their families—make in committing to the cause. Recognize that the soldiers in the skies and on the ground are not the ones who decide to go to war, and should not have to bear the political consequences of the government's decisions.

When reading through the personal stories that have emerged in the two weeks following the crash, the motto of the U.S. Air Force Special Operations Command (AFSOC) Pararescue comes to mind: "That Others May Live." These brave souls gave their lives so that the rest of us can live ours to the fullest. In my book, that's still the ultimate sacrifice.

Honoring the Fallen

The following is a list of 30 U.S. personnel who died in the Chinook crash in Afghanistan, according to the Department of Defense. Seven Afghan troops and an interpreter were also killed in the crash:

U.S. Navy SEALs: Lt. Cmdr. Jonas B. Kelsall; Special Warfare Operator Master CPO Louis J. Langlais; Special Warfare Operator Senior CPO Thomas A. Ratzlaff; Explosive Ordnance Disposal Technician Senior CPO (Expeditionary Warfare Specialist/Freefall Parachutist) Kraig M. Vickers; Special Warfare Operator CPO Brian R. Bill; Special Warfare Operator CPO John W. Faas; Special Warfare Operator CPO Kevin A. Houston; Special Warfare Operator CPO Matthew D. Mason; Special Warfare Operator CPO Stephen M. Mills; Explosive Ordnance Disposal Technician CPO (Expeditionary Warfare Specialist/Freefall Parachutist/Diver) Nicholas H. Null; Special Warfare Operator CPO Robert J. Reeves; Special Warfare Operator CPO Heath M. Robinson; Special Warfare Operator PO1 Darrik C. Benson; Special Warfare Operator PO1 (Parachutist) Christopher G. Campbell; Information Systems Technician PO1 (Expeditionary Warfare Specialist/Freefall Parachutist) Jared W. Day; Master-at-Arms PO1 (Expeditionary Warfare Specialist) John Douangdara; Cryptologist Technician (Collection) PO1 (Expeditionary Warfare Specialist) Michael J. Strange; Special Warfare Operator PO1 (Enlisted Surface Warfare Specialist) Jon T. Tumilson; Special Warfare Operator PO1 Aaron C. Vaughn; and Special Warfare Operator PO1 Jason R. Workman.

The following SEALs were assigned to a West Coast-based Naval Special Warfare unit: Special Warfare Operator PO1 Jesse D. Pittman and Special Warfare Operator PO2 Nicholas P. Spehar.

Five other U.S. personnel died in the crash: CWO David R. Carter; CWO Bryan J. Nichols; Sgt. Patrick D. Hamburger; Sgt. Alexander J. Bennett; and Spc. Spencer C. Duncan. Airmen involved in the crash were Tech. Sgt. John W. Brown; Staff Sgt. Andrew W. Harvell; and Tech. Sgt. Daniel L. Zerbe.

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Photo courtesy U.S. Air Force Senior Airman Christina D. Ponte

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(Above) Enstrom 480B certified in China. (Below) Cobham HeliSAS stability augmentation system. (Right) Sikosky HH-60H with the Black Knights prepares to land on USS Ronald Regan in the South China Sea on August 16. U.S. Navy photo by Michael Feddersen.

FEATURES

On the Cover: Coalition troops depart southern Marjah District in Afghanistan's Helmand province using a USMC MV-22 Osprey during Operation Watchtower in late March 2011. Bell Boeing is seeking a five-year extension of its V-22 program with the U.S. government. *Photo by Sgt. Jesse Stence via DVIDS*

DEPARTMENTS

COLUMNS

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VIDEO FOOTAGE FROM ALEA

- Check out exclusive videos from the Airborne Law Enforcement Association's 41st Annual Convention and Exposition at **rotorandwing.com** and look for exclusive ALEA photos at **www.facebook.com/rotorandwing**

ASK-THE-EXPERT

- Ask questions to three experts on the topics of helicopter aerodynamics, AS9100 quality management systems audits and night vision goggle (NVG) certification at **rotorandwing.com**. Che Masters, certification engineer for NSF-ISR, discusses aerospace quality registration. Frank Lombardi, test and evaluation pilot, provides insights about the science behind helicopter flight. NVG certification expert Jessie Kearby fields questions about NVGs for both military and commercial uses.

DIRECT TO YOUR DESKTOP: CHECK YOUR E-MAIL

SEPTEMBER 1

- Digital edition of *Rotor & Wing* September 2011. Electronic version with enhanced web links makes navigating through the pages of *Rotor & Wing* easier than ever.

WEEK OF SEPTEMBER 12

- HOT PRODUCTS for Helicopter Operators—Latest in equipment upgrades, performance modifications, training devices and other tools for the rotorcraft industry.

WEEK OF SEPTEMBER 26

- *Rotor & Wing*'s Military Insider. Get the latest updates from helicopter defense companies around the world, from Military Editor Andrew Drwiega.

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Feedback

Back Pain Brought to Light

Amen, and it's about time this topic is brought to light! (See *"Helicopter Seating Forum Highlights Back and Neck Pain,"* page 18.) I'm a retired U.S. Army pilot. Like many others I did not visit the flight doc for my back problems. I've been retired for seven years and continue my fight with the VA to call my back problems service connected. I'd be willing to accept zero percent disability, but it's very insulting to me when the VA sends me letter after letter stating it was non-service connected. I joined the army when I was 18 with no back problems, retired almost 29 years later with debilitating back issues that affect my everyday quality of life. I always suspected, but did not realize [that] the problem was so widespread. Thank you for the article and attention to the issue. I hope it helps all well-deserving vets find justice. I would also advise all active duty aviators to report their back problems and have them recorded in their medical records.

D. Smith
Senior Air Safety Investigator, Instructor
U.S. Department of Transportation
Transportation Safety Institute
Oklahoma City, Okla.

Keeping IIMC Real

I wanted to express my appreciation for Mike Redmon's article on IIMC in the March issue of *Rotor & Wing* (See *"IIMC: What Not to Do,"* page 68). Thank you for highlighting some of the more realistic aspects of this emergency.

As a former U.S. Army OH-58D Kiowa Warrior instructor pilot and instrument flight examiner, I applied these very same principles alongside other instructors who emphasized the danger of IIMC encounters. It's a VFR-only aircraft with no navaid receivers. The GPS was pretty accurate though. I taught my students how to overlay published instrument approach procedures utilizing only GPS coordinates. Navaid coordinates are right there in our pubs. Since all Army aviators are instrument-rated, there was no good reason to abandon the techniques and procedures that have previously been learned.

Immediately fall back on the procedures, and an inadvertent encounter with IMC is no different than a planned flight into IMC. Thanks again for "keeping it real."

Neil Ehringer
Offshore Helicopter Pilot
Panama City, Fla.

R&W's Question of the Month

What operational lessons can be learned from the Aug. 6, 2011 crash of a U.S. National Guard Boeing CH-47D Chinook in Afghanistan?

Let us know, and look for your and others' responses in a future issue. You'll find contact information below.

Safe Flying Made More Difficult?

While reading the article, *"Safe Flying In Unsafe Weather,"* (July 2011, page 38) in search of safe flying ideas for my students, I was left wondering maybe it's safe to fly in unsafe weather. While I agree with Mark Robins' thesis that safe flying starts with smart decision-making, I came away wondering if your audience of inexperienced pilots will now have a more difficult decision whether to go fly or not. Paradoxical statements abound.

"High winds are a planning issue but no problem." Until poor planning takes you into them; what do I do then? Also, "flying through heavy clouds and fog is no issue; all helicopters can do that all day long" is followed in the proceeding paragraph with "The majority of helicopters are VFR only." While talking about thunderstorms, Mr. Robins states correctly that, "Violent conditions in and around thunderstorms can exceed rotorcraft structural limitations and bring a helicopter down in seconds." But then the article proceeds to state, "Flying near a thunderstorm does not necessarily represent a major safety issue." So I can fly near a thunderstorm, but shouldn't be around one?

It's not pilots "quickly getting into situations that overwhelm the capabilities of the helicopter," but pilots allowing themselves to get into situations in which they are overwhelmed. Weather-related fatal incidents will not drop until more pilots understand the dangers of poor decision-making. Let's not make this decision any more difficult.

Jeff Hubbard
CFI

Correction

The maker of the Boeing CH-46E Sea Knight was mistakenly attributed to another manufacturer on page 40 of the Training News section in the August 2011 issue. We regret the error.

Do you have comments on the rotorcraft industry or recent articles and viewpoints we've published? Send them to: Editor, Rotor & Wing, 4 Choke Cherry Road, Second Floor, Rockville, MD 20850, fax us at 301-354-1809 or email us at rotorandwing@accessintel.com. Please include a city and state or province with your name and ratings. We reserve the right to edit all submitted material.

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Meet the Contributors

CHRIS BAUR is a dual-rated ATP with more than 11,000 flight hours, a certified aircraft dispatcher and flight instructor. He is a retired military pilot who served in the U.S. Army, Coast Guard and Air Force (ANG). Chris is currently president of Hughes Aerospace.

LEE BENSON is the retired senior pilot for the Los Angeles County Fire Department. Before he was named senior pilot, Lee ran the aviation section's safety and training programs, including organizing the section's yearly safety meeting with other public agencies and the press.

ANDREW DRWIEGA, Military Editor, is a senior defense journalist with a particular focus on military rotorcraft. He was the editor of *Defence Helicopter* for seven years. Andrew has reported on attachment from Iraq three times (the latest of which was with a U.S. Marine Corps MV-22 squadron), and three times with British forces in Afghanistan (Kandahar and Camp Bastion), as well as from numerous NATO and British exercises. He has reported on rotary forces across the world, and in doing so has flown in a wide variety of rotorcraft on training missions, exercises and operations, including the Osprey, Apache, Rooivalk and many others. He has an extensive military library of around 400 books.

ROBERT MOORMAN has written for more than 25 years about the aviation industry, including rotorcraft. His articles have ranged from topics on commercial, regional, cargo, maintenance, training, safety, information technology and business aviation, to the U.S. military. Moorman runs his own freelance writing and communications business in the Washington, D.C., area.

DOUGLAS NELMS has more than 30 years of experience as an aviation journalist and currently works as a freelance writer. He has served as managing editor of *Rotor & Wing*. A former U.S. Army helicopter pilot, Nelms specializes in writing about helicopters.

CHRIS SHEPPARD is the Associate Editor of *Rotor & Wing*. Coming from a strong background in journalism and public relations, she was an editor for a leading online newswire for several years. She is currently pursuing her master's degree in Journalism at Georgetown University in Washington, D.C. She can be reached at **csheppard@accessintel.com**.

DALE SMITH has been an aviation journalist for 24 years specializing in business aviation. He is currently a contributing writer for *Rotor & Wing* and other leading aviation magazines. He has been a licensed pilot since 1974 and has flown 35 different types of general aviation, business and WWII vintage aircraft.

ERNIE STEPHENS, Editor-at-Large, began flying in the 1980s, earning his commercial pilot's license and starting an aerial photography company as a sideline. In his regular job as a county police officer, he was transferred to the department's newly established aviation unit, where he served as the sergeant in charge and chief pilot until his retirement in 2006. In addition to regular contributions in the pages of *Rotor & Wing*, Ernie (aka "Werewolf") has written for Access Intelligence sister publication *Avionics* Magazine [**www.aviationtoday.com/av**],well as *Aviation Maintenance*. He enjoys meeting our readers and flying a variety of helicopters.

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Rotorcraft Report

A Sikorsky MH-60S Seahawk with Helicopter Sea Combat Squadron (HSC) 23 lands on board the USS Makin Island (LHD 8) in the Pacific Ocean. USS Makin Island is preparing for its first operational deployment.

Photo by Mass Communication Specialist 1st Class Douglas Bedford

■ **MILITARY** | SPECIAL OPS

CH-47 Chinook Crash Kills 38 in Afghanistan

A U.S. National Guard Boeing CH-47D Chinook crashed in the Wardak province of Afghanistan on August 6, resulting in the deaths of 38 people onboard, including 30 U.S. service members. According to the U.S. Department of Defense, among the 25 special ops forces on board, 22 were part of the covert Navy unit known as SEAL Team Six, which carried out the raid on Osama bin Laden in May. Five Army aviators, three Air Force Special Operations personnel, and a military dog rounded out the U.S. crew. Seven Afghan commandos and one interpreter were also on board. The crash was the deadliest single-day loss for the U.S. since the Afghan conflict began.

The NATO International Security Assistance Force (ISAF)-led helicopter and its crew were transporting the SEALs on a "quick reaction" mission for Army Rangers who were under fire, according to a U.S. military spokesperson. The Rangers were attempting to capture Taliban leader Mullah Mohibullah. The Taliban quickly claimed responsibility for shooting down the Chinook. The crash investigation, led by Army Brig. Gen. Jeffrey Colt, deputy commander of the 101st Airborne Division at Fort Campbell, Ky., confirmed that the Chinook was shot down with a rocket-propelled grenade from the ground. U.S. military officials called the attack a "lucky shot." The helicopter was also hit with small-arms fire, according to officials. ISAF Commander of U.S. and Afghan Forces, Marine Corps Gen. John Allen called the crash "a singular incident in a broader conflict."

Two days after the Chinook crash, U.S.-led forces tracked the Taliban cell responsible for the attack back to their hideout and carried out an F-16 "precision airstrike," stated the ISAF. Mohibullah, several Taliban associates and the insurgent that fired the fatal shot at the Chinook were killed.

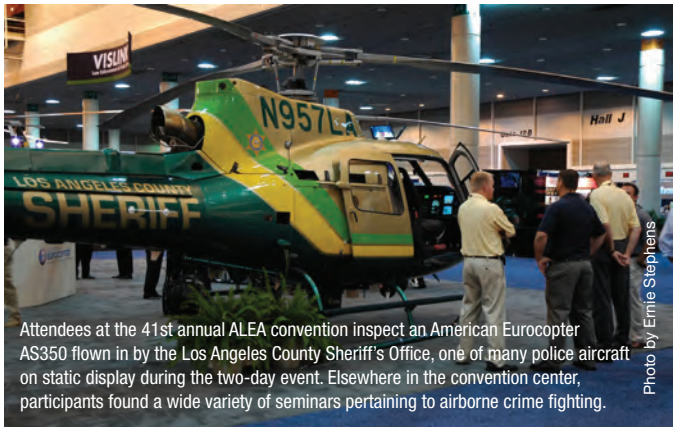
■ **PRODUCTS** | ENGINES

Russia Certifies Rolls-Royce RR300 for Robinson R66

Rolls-Royce has received IAC-AR certification for its RR300 engine on Robinson R66s in Russia. Robinson's gas-turbine variant is now flight operational in the country and expected to perform well, a Rolls-Royce spokesperson said. The RR300 had previously received FAA certification in 2010.

PUBLIC SERVICE | LAW ENFORCEMENT

ALEA Meets in New Orleans for 41st Annual Convention



Attendees at the 41st annual ALEA convention inspect an American Eurocopter AS350 flown in by the Los Angeles County Sheriff's Office, one of many police aircraft on static display during the two-day event. Elsewhere in the convention center, participants found a wide variety of seminars pertaining to airborne crime fighting.

Photo by Ernie Stephens

New Orleans was the site of the Airborne Law Enforcement Association's 41st Annual Convention and Exposition, which ran from July 20th through 23rd. Co-hosted by the Louisiana State Police, the event drew both helicopter and fixed-wing aircrews from across North America for seminars, exhibits and social events.

Line aircraft from federal, state and local law enforcement agencies were placed on display by AgustaWestland, American Eurocopter, Bell, Enstrom, MD and Sikorsky in the 300x360 foot exhibit hall of the Ernest N. Morial Convention Center, along with over 170 suppliers of mission avionics, flight apparel and training devices. All tolled, approximately 1,200 attendees descended upon "The Big Easy" to see the exhibits, and participate in a host of free seminars covering nearly everything from water egress training to ALEA's first certification class for users of thermal imaging equipment.

During the grand opening, Col. Michael D. Edmonson, commissioner of the Louisiana State Police, took the podium to welcome the organization, and to acknowledge the contributions made by law enforcement aviators in the aftermath of hurricane Katrina in 2005. Some of the crewmembers who participated in the rescue and recovery efforts were in attendance. "Eighty-five percent of [New Orleans] was underwater," said Edmonson. "And when the call went out for help, you rose to the occasion and came here, and I appreciate that."

Reminders of the slow economy and its impact on public safety aviation units may have been present at ALEA's gathering. For the first time in at least five years, the event did not include the splash and fanfare of manufacturers' deliveries of new aircraft to police and sheriff departments. While acknowledging that sales are slow, a representative from one of the helicopter companies, who asked not to be identified, blamed poor timing for the lack of new handover ceremonies. "We've sold some new police aircraft," the employee said. "But in our case, we either delivered them well before the date of the show, or the customers were unable to spare the people or the aircraft to come here for a formal handover."

ALEA's next conference will be held in Reno, Nev. from July 11-14, 2012. — *By Ernie Stephens, Editor-at-Large*

To take a video tour of some of the rotorcraft that were on display during ALEA, including an autogyro used for police patrol, visit www.rotorandwing.com

PRODUCTS | ENGINES

P&W EcoPower Expands to Helos

Pratt & Whitney has completed a trial run of its EcoPower engine wash on U.S. Navy Sikorsky SH-60 Seahawks. Testing was held at Naval Base Coronado, Calif., and was the first military helicopter test of the product. The environmental friendly engine wash uses a closed-loop system with atomized water to decrease engine temperatures, reduce the amount of fuel burned and the carbon dioxide emissions given off during flight.

SERVICES | COMPLETIONS

UTair Ecureuil Deliveries Begin

UTair Aviation in Russia has received the first of 20 Ecureuils variants from Eurocopter's Vostok subsidiary. The first helicopter delivered was a single-engine AS350B3 with an enhanced AS350B3e variant to follow. UTair will also be the first operator of the new AS355NP in the country. The helicopters will be used in a variety of roles including transport, offshore patrol and medevac flights.

TRAINING | MILITARY

Boeing Trains Kiowa Pilots

The Australian Army has contracted Boeing to provide simulator training for its Bell 206B1 Kiowas. Boeing will provide the Army with a Helimod sim from New South Wales, Australia-based Ryan Aerospace as part of its Army Aviation Training and Training Support (AATTS) contract. Australia will train the pilots with Kiowas before moving them onto Boeing CH-47D Chinooks, Tiger ARHs and MRH 90s. The Army currently uses a training fleet of 19 Kiowas, six S-70 Black Hawks, two civil Bell 412s and one Black Hawk full-motion sim.

■ COMMERCIAL | AIRFRAMES

China Certifies, Thailand Receives Enstrom 480Bs

Enstrom

Wuhan Helicopters in China has received this agricultural operations-ready Enstrom 480B.

Menominee, Mich.-based Enstrom Helicopter Corp. has obtained Civil Aviation Administration of China (CAAC) civil type certification for the 480B. It becomes the fourth Enstrom model to receive certification in the country, including the 280FX. The approval follows Enstrom's first delivery of a 480B in China to Wuhan Helicopters. Wuhan's 480B is configured for agricultural operations with an Isolair spraying system, Garmin GPS and Safe Flight powerline detection system. Enstrom also delivered its first three 480B training/utility configured 480Bs to the Royal Thai Army's air base in Lop Buri. The army has ordered a total of 16 Enstrom 480Bs, with the next three scheduled for delivery in the near future. Along with helicopters, the Thai Army received training in March and June. Twenty-one pilots had a week of ground school, avionics training and five flight hours, while 28 mechanics were given in-depth classes over two weeks at Enstrom's Michigan facility.

■ MILITARY | AIRFRAMES

Thailand Prepares for First MH-60S

Sikorsky has completed its first international delivery of the MH-60 variant. The Royal Thai Navy purchased the two MH-60S Seahawks through the U.S. government's foreign military sales program. The helicopters will add to the Thai Navy's existing Sikorsky fleet of six S-70B Seahawks and six maritime-modified S-76Bs. The Thai MH-60s will be used for utility and search and rescue missions. The U.S. Navy will provide pilot and maintenance training, as well as logistical support.

Sikorsky

One of two Sikorsky MH-60S Seahawks purchased by the Royal Thai Navy.

■ PRODUCTS | AIRFRAMES

Mahindra, HAL Join Eurocopter

Eurocopter has struck long-term agreements with two helicopter manufacturers in India. Mahindra Satyam and Mahindra Aerospace—the engineering and aircraft manufacturing subsidiaries of Mahindra Group—have signed memorandums of understanding with the helicopter OEM. Eurocopter has also inked a series of cooperation agreements with Hindustan Aeronautics Limited (HAL), extending a 40-year partnership between the two companies.

■ MILITARY | SIMULATORS

Indra Wins AW159 Sims Contract

AgustaWestland has selected Spanish IT company, Indra, to develop AW159 Lynx Wildcat simulators for the British Ministry of Defence. Both the British Army and Royal Navy fly the AW159. The Level D sims will be part of the new AgustaWestland training center at Royal Naval Air Station Yeovilton. According to Indra, the Army simulators will be ready for training in 2013, with the Royal Navy's sims scheduled to enter service in 2014.

■ MILITARY | COMPLETIONS

ARINC Completes Mi-17s for Iraq

Annapolis, Md.-based ARINC Engineering Services has modified and delivered the last of 22 Russian Mi-17s for the Iraqi Air Force. This follows a similar upgrade ARINC carried out last year on 10 Mi-17s for the Air Force of Afghanistan. Modifications and upgrades for the Iraqi and Afghani helicopters were performed at ARNIC's facility in the United Arab Emirates. ARINC will also provide maintenance training and logistic support for the Iraqi aircraft at Camp Taji.

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COMMERCIAL | AIRFRAMES

Cabri G2 Names UK Distributor

The Cabri G2 will soon be flying over British skies.

Helicopteres Guimbal has designated Cotswold Helicopter Centre as its UK distributor for the Cabri G2. The first helicopter will arrive at Cotswold this summer, with pilot training to start shortly afterward. According to Helicopteres Guimbal, the UK is expected to emerge as one of the Cabri G2's largest markets. The Cabri G2 will also make it UK debut during Helitech in September.

PUBLIC SERVICE | POLICE

Fayette Revamps Aviation Unit

This Eurocopter AS350B2 replaces FCSO's older, Army surplus helicopter.

The Fayette County Sheriff's Office (FCSO) in Georgia is overhauling its aviation unit with a Eurocopter AS350 B2. The helicopter will replace a U.S. Army surplus Bell OH-58 Kiowa, which was causing issues with maintenance costs and down time, according to the Sheriff's Office. A Turbomeca Arriel 1D1 engine powers the AS350B2, which also comes with a sling that holds more than 2,555 lbs.

MILITARY | AIRFRAMES

Bell Boeing Seeks V-22 Extension

The Bell Boeing V-22 Osprey program has presented a second multiyear procurement (MYP II) proposal to the U.S. government for production and delivery of the tiltrotor through 2019. The proposed five-year contract extension would cover the production of 115 Marine Corps MV-22s and seven CV-22s for the Air Force Special Operations Command (AFSOC). The current contract, which runs until 2012, will produce 143 MV-22s and 31 CV-22s.

TRAINING | MILITARY

Navy Contracts CAE for MH-60 Trainers

CAE has won recent contracts for various rotorcraft simulators, including from military and civil operators. As part of a U.S. Navy contract, CAE will provide two Sikorsky MH-60R tactical operational flight trainers (TOFTs). The first simulator will be a fixed-based MH-60R TOFT stationed at Naval Air Station Jacksonville in Florida. The Marine Corps Air Station at Kaneohe Bay, Hawaii will house the second sim. Both TOFTs are set for delivery in late 2013.

PRODUCTS | ENGINES

Phoenix Heliparts Adds M250s

StandardAero has named Mesa, Ariz.-based Phoenix Heliparts as an authorized support center for Rolls-Royce M250-powered MD500s. The company will also offer repair and overhaul services, with a focus on Series II and IV gas turbine engines, models C20B, C20R, C30 and C47. Phoenix Heliparts has serviced MD500s and other MD variants for more than 20 years.

COMMERCIAL | SAR

Fourth EC225 Lands in China for SAR Duty

Eurocopter

China's Ministry of Transport (MoT) has received its fourth Eurocopter EC225 (shown at left). The delivery completes the contract extension the MoT signed in 2009 after the first two Chinese EC225s were a vital part of search and rescue missions following the 2008 Sichuan earthquake. The Rescue and Salvage Bureau will use the helicopters for offshore SAR missions.

PRODUCTS | COMPLETIONS

Japan Forces Add Becker TH-135s

Becker Avionics has installed its DVCS6100 digital audio system in two Eurocopter TH-135 trainers that have entered service with the Japanese Maritime Self Defense Force (JMSDF). The Japanese market is new territory for Becker, according to a company spokesperson. Eurocopter has delivered a total of five of the modified EC135s under a 15-helicopter order.

COMMERCIAL | OPERATORS

Era Files for Initial Public Offering

SEACOR Holdings has filed an initial public offering for its Lake Charles, La.-based subsidiary, Era Group, Inc. Era is the Aviation Services portion of SEACOR and flies one of the largest rotorcraft fleets in the world, with more than 170 helicopters. Era's fleet includes Sikorsky S-76 variants, AgustaWestland AW139s, and Eurocopter EC135s and 225 Super Pumas.

■ MILITARY | ATTACK

Helicopter Seating Forum Highlights Back and Neck Pain

The health and mission effects of helicopter pilots and crewmembers who suffer from back and neck pain due to flying took center stage in late July during the Rotary-Wing Aircraft Seating Forum in Washington, D.C. A panel of speakers from military and scientific industries presented findings—as well as personal experiences—in regards to back and neck pain. The forum included representatives from the U.S. Army, Navy, Marine Corps and Air Force Research Laboratory. It served as a launching point for the results of a U.S. Department of Defense (DoD) survey conducted earlier this year by R Cubed Consulting involving more than 7,000 current and former military pilots and crewmembers operating various helicopters, including Bell, Boeing and Sikorsky variants.

Kristin Hamon of IH Solutions Consulting noted that more than 50 percent of respondents to the DoD survey stated that they experienced discomfort either during or after flight. She added that almost 2,500 active duty pilots and crew experienced discomfort during flight. Another 29 percent "indicated that their discomfort and pain affected their ability to perform their job in flight," Hamon said, adding that 63 percent did not seek out medical treatment out of fear of being downed.

U.S. Navy Lt. Andrea Phillips presented her Naval Postgraduate School thesis based on a survey of more than 500 Sikorsky MH-60 pilots, 88 percent of which reported experiencing back or neck pain during or directly after flying. One of the main culprits identified is seat design. Helicopter seats are either poorly padded, the padding is worn down or inflated using an "air bladder," she noted. Air bladder seats are filled prior to flight by blowing into a communal tube to inflate the seats. In Phillips' survey, pilots and crewmembers were able to contribute comments. She collected 593 responses. "I had a flight on deployment where I was unable to turn my head to the left due to neck pain so I flew [in the] left seat to enable me to see inside the cockpit in the event of an emergency. I was unable to clear the left side of the aircraft without turning my whole torso, so we put a second crewman on the left side," one pilot responded. Another wrote, "Anything that distracts from an already difficult mission takes away from situational awareness. If I'm thinking about my back pain or trying to find a position that will alleviate the pain, I am not thinking about maintaining situational awareness."

Philips' survey also showed that of the 88 percent of pilots who experienced back pain, only 20 percent would see the flight doctor for their pain. Many suffering pilots and crew "aren't going to the flight doctors because they are worried about being downed." Phillips added that the medical routine for treatment doesn't do much to encourage pilots and crew to seek out a flight surgeon. "Basically they get 10 days of Motrin and if they're not better, [the flight doctors]

have to down them," Phillips said. For some pilots, the combination of heavy helmets, cumbersome equipment and constrictive cockpit space lead to what is commonly known as "helo hunch."

Helo hunch occurs when pilots lean forward to see out the cockpit windows while resting their elbows on their knees to reach the cyclic and collective. The addition of a helmet, survival vest and night vision goggle (NVG) equipment then places additional weight and strain on the neck and shoulders, as the pilot must keep his head up. The awkwardness of this position is further exacerbated depending on the height of the pilot—the taller the pilot, the more pronounced the hunch. Adding lumbar supports seems like an easy enough adjustment, but as Phillips pointed out, pilots are not allowed to bring unauthorized lumbar pillows during operations "because they view it as an egress hazard." Phillips remarked that she could not find any documented cases to support this theory.

Dick Healing, with R Cubed Consulting, observed that current seats still follow a design meant to minimize damage and fatalities from vertical crashes that were prevalent during the Vietnam War.

"We have to recognize that we don't fly the same way we did in Vietnam," he said. Healing also pointed out that flight time had changed in the intervening years. Vietnam flights were usually "one to two hours," where flight time during Operation Iraqi Freedom could be anywhere from six to 12 hours. Healing recounted a time when with the Secretary of the Navy's office he flew with Marines and was told how one pilot brought three rolled-up bath towels to stuff behind his back during flight to provide relief from the pain. Afterward the office sent blow-up belts to squadron. "It wasn't long before someone said, 'That is unauthorized equipment. If there's an accident, that will be the cause of the accident,'" Healing said, adding that the belts were taken away from the squadron.

"Our warfighters are screaming for relief," said RaNae Contarino of R Cubed Consulting. But are the decision-makers listening? *—By Chris Sheppard, Associate Editor*

MILITARY | AIRFRAMES

Sikorsky Delivers First S-70i Black Hawks

The first three Sikorsky S-70i Black Hawks have been delivered from the company's Mielec, Poland facility to an unnamed customer. This marked the first delivery of the international Black Hawk variant. The Black Hawks feature T700-GE701D engines, advanced digital avionics and multi-mission configuration.

An S-70i is loaded onto a cargo plane for delivery.

■ COMMERCIAL | OFFSHORE

EC135 Serves French Seaport

Eurocopter

Dunkirk, one of the busiest seaports in France, uses EC135s to guide more than 1,400 ships into the Grand Port Maritime each year.

Eurocopter has delivered an EC135 that will serve Dunkirk's Grand Port Maritime in France. The EC135 will guide ships through the port's entrances by transporting a pilot to help navigate and dock an incoming vessel. Dunkirk, the third largest seaport in France, uses helicopter assistance involving more than 1,400 ships each year. The new helicopter replaces an AS355 Ecureuil/AStar.

■ COMMERCIAL | EMS

AgustaWestland Receives UK Loan

The UK Department of Business, Innovation and Skills has issued a £22-million ($36-million) loan to Italian manufacturer AgustaWestland for continued development of its AW169 program. The loan allows AgustaWestland to expand its Yeovil facility to include AW169 fight testing and training. The plant will add the design, development and manufacturing of rotor blades, intermediate and tail gearboxes and tail rotor hubs, to its roster as well. AgustaWestland has also sold its first AW169s in the UK—two for the Warwickshire & Northamptonshire Air Ambulance (WNAA) in England. The EMS-configured helicopters will be delivered to WNAA in 2015. WNAA currently flies an AW109E Power.

■ TRAINING | MILITARY

Army Helicopters Amp Up Training at Fort Riley

The U.S. Army's Combat Aviation Brigade, 1st Infantry Division, recently completed training with the ground forces of the 1st Battalion, 28th Infantry Regiment in Fort Riley, Kan. The CAB's fleet of Sikorsky Black Hawks and Boeing Chinooks conducted troop movements, air assault exercises and "cold load" training. The 1-28 Battalion is preparing for an Afghanistan deployment next year.

Above, soldiers with the 1st Battalion, 28th Infantry Regiment perform "cold load" exercises with a Boeing Chinook at Fort Riley, Kan. On the left, a soldier provides security during air assault training. Both Chinooks and Sikorsky Black Hawks participated in the training exercises.

PEOPLE

CHC Helicopter has appointed **John Graber** as president of its Helicopter Services division. He replaces interim president **Scott Pinfield**. Graber was most recently president of ABA Air and prior to that president of MRO AAR Aircraft Services Indianapolis. He is also a decorated medevac helicopter pilot who served in Operation Desert Storm.

The company also announced that **Doug Yakola** of McKinsey & Co. is serving as acting as interim chief financial officer, taking over for **Rick Davis**, former executive vice president and CFO. CHC has yet to name a permanent replacement for Davis, who will be assisting with the transition process.

Wichita, Kan.-based Mid-Continent Instruments has hired **John Gallman** as director of its True Blue Power division. He comes from Cessna Aircraft, where he was principal engineer for technology development. Other previous experience includes working at NASA Ames, as well as for Learjet and Raytheon Aircraft.

Bobby Risbourg has joined Precision Aviation Group subsidiary, Precision Heliparts, as regional sales manager for the Gulf region. Risbourg was with Chevron's Aviation division for 30 years as manager of aviation parts and purchasing. He will be based in Lafayette, La.

Training supplier FlightSafety International has selected **Damon Cram** as director of marketing for simulation products and services. Cram spent 11 years at CAE as general manager, sales director and business development and sales lead for commercial aircraft training. FlightSafety also promoted **Mitch Alexander** as manager of its Daleville, Ala., learning center. Alexander fills the position of former manager **Ralph Hicks**, who is retiring after 26 years with the company.

Chromalloy has named **Will Zmyndak** director of operations at its facility in Orangeburg, N.Y. Zymndak will lead the advanced coating and repair arm of Chromalloy and support gas turbine activities. Zymndak comes to the company from aerospace unit of Barnes Group Inc., where he was vice president of aftermarket operations.

Kaman Helicopters has hired **Jeff Sharbaugh** as proposal manager. He will oversee proposals and development projects for Kaman. Sharbaugh's previous experience includes working at Ducommun Aerostructures, Lord Corp. and Hamilton Sundstrand.

Capt. **John Smajdek** has taken over as commanding officer of Fleet Readiness Center Southwest (FRCSW), replacing Capt. **Fred Melnick**. Smajdek served as the executive officer of FRCSW prior to the promotion.

Broomfield, Colo.-based Aircell has named **Dennis Hildreth** as manager of original equipment manufacturer (OEM) sales. Hildreth was previously principal marketing manager for Rockwell Collins, following 27 years with Hawker Beechcraft.

coming events

2011:

Sept. 13: Avionics for NextGen Conference, Atlantic City, N.J. Contact Access Intelligence, phone 1-301-354-1813 or visit www.AvionicsforNextGen.com

Sept. 27–29: Helitech Duxford 2011, Duxford, UK. Contact Reed Exhibitions, phone +44 (0) 208 439 8886 or visit www.helitechevents.com

Oct. 10–12: AUSA Annual Meeting, Washington, D.C. AUSA, phone 1-703-841-4300, 1-800-336-4570 or visit www.ausa.org

Oct. 10–12: NBAA 64th Annual Meeting & Convention, Las Vegas, Nev. NBAA, phone 1-202-783-9000 or visit www.nbaa.org

Oct. 17–19: Association of Air Medical Services (AAMS) Air Medical Transport Conference (AMTC), St. Louis, Mo. Contact AAMS, 1-703-836-8732 or visit www.aams.org

Oct. 25–27: American Helicopter Society (AHS) Intl Specialists' Meeting on Propulsion, Williamsburg, Va. Contact AHS Intl, phone 1-703-684-6777 or visit www.vtol.org

Nov. 28–Dec. 1: Interservice/Industry Training, Simulation and Education Conference (I/ITSEC), Orlando, Fla. Contact I/ITSEC, phone 1-703-247-2569 or visit www.iitsec.org

Dec. 6–7: SAR Asia 2011, Singapore. Contact AHS Intl, phone 1-703-684-6777 or visit www.vtol.org

2012:

Jan. 18–20: AHS Specialists' Conference on Future Vertical Lift Aircraft Design, San Francisco, Calif. Contact AHS Intl, phone 1-703-684-6777 or visit www.vtol.org

Feb. 11–14: HAI Heli-Expo 2012, Dallas, Texas. Contact HAI, 1-703-683-4646 or visit www.rotor.com

Feb. 22–24: Association of the U.S. Army (AUSA) Winter Symposium, Fort Lauderdale, Fla. Contact AUSA, 1-703-841-4300, toll free 1-800-336-4570 or visit www.ausa.org

April 22–27: Medical Transport Leadership Institute, Wheeling, W.V. AAMS, 1-703-836-8732 or visit www.aams.org

May 1–3: AHS Intl 68th Annual Forum and Technology Display, Fort Worth, Texas. Contact AHS Intl, phone 1-703-684-6777 or visit www.vtol.org

May 22–24: European Business Aviation Association and NBAA's EBACE 2012, Geneva, Switzerland. Contact EBAA, +32 2 766 0073 or visit www.ebaa.org

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Mission-specific training uses realistic scenarios to prepare pilots and crew for the conditions and situations they encounter in the field. Whether your mission is corporate/executive transportation, emergency medical transport, offshore support, law enforcement or newsgathering, our industry-leading training focuses on your particular challenges, helping ensure that you're prepared when the routine turns into the unforeseen.

We offer training for Bell helicopters at Fort Worth, Texas, and Lafayette, Louisiana, and for Sikorsky helicopters at West Palm Beach, Florida; London Farnborough, England; and Lafayette. Our Lafayette Learning Center dedicates its efforts wholly to helicopter safety training, offering Customer-specific training supporting multiple aircraft manufacturer product lines. The center's training programs serve all sectors of the industry, including the large and diverse fleet operating in the Gulf of Mexico.

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From the publisher of rotor&wing

REBTECH Makes Six Bell 412s NVG Compatible

Night vision technology innovator and service provider REBTECH recently converted six foreign military Bell 412 aircraft to night vision goggle (NVG) compatibility. The company provided the custom conversion kits as well as installation at the customer's location. In addition to the modification of all instruments, radios and displays in the cockpit and cabin, REBTECH designed and installed dual-mode covert and NVIS friendly position, anti-collision and searchlight. The design was based off of the REBTECH Bell 412 supplemental type certificate (STC). REBTECH, best known for custom tailored night vision solutions for fixed and rotary wing aircraft around the world, has the capability to design, manufacture and install comprehensive military and civil NVG systems for any mission type required. Based in Bedford, Texas, REBTECH utilizes a highly experienced staff with an extensive background in lighting technology and worldwide military and civil night vision operations. As a component to providing comprehensive customer support, REBTECH not only offers installation services but also provides AOG support for all installed equipment offered by the company. The main offices of REBTECH also include an FAA FAR Part 145 repair station with aircraft instrument inspection, repair, and modification with overhaul capability as well as STC project design and approval services. REBTECH, 1-817-285-7740 or visit **www.rebtechnvg.com**

Stay Connected When it Matters Most with Polycon

Becker Avionics now offers the Polycon wireless solutions for search and rescue (SAR), emergency medical services (EMS), law enforcement and special mission operations. The Polycon wireless intercom extension system provides the capability to rotary and fixed-wing operators to have audio communications between crewmembers in and away from the aircraft. The Polycon system eliminates communication restrictions by providing seamless hands-free, wireless communications to all crewmembers to effectively perform their mission. Pilots and off-aircraft flight paramedics preparing a patient for transport and evacuation can remain in constant communication while on the ground or in flight during a hoist rescue mission (up to 15 nautical miles). The Polycon System has been developed for the rigorous demands of SAR teams, operating in extreme conditions. Its rugged construction with long-range capability and semi duplex communication integrates the external operating crew as a component of the aircraft intercom system and provides increased situational awareness and safety. The mobile transceiver is waterproof up to three feet, with its integral microphone built into the mobile transceiver; helmet removal is not required to speak to casualty/patient. The system (RTCA DO-160D qualified) is flying on the most popular SAR helicopters such as the EC135, EC145, AS332L2 / EC225, S-76, S-92, and AW139. Becker Avionics, 1-954-450-3137 or visit **www.beckerusa.com/polycon**

Uniflight Adds Avionics Installation

Helicopter specialist, Uniflight, LLC will now offer an expanded aircraft avionics installation, modification, inspection and repair for law enforcement, air medical, corporate and utility helicopter owners and operators. Uniflight's flagship facility, based in Grand Prairie, Texas, and satellite facilities including their newest location Rostraver Airport (KFWQ) in Westmoreland County near Pittsburgh in Belle Vernon, Pa; a facility at Griffiss International Airport near Rome, N.Y.; and a location at the Reading Municipal Airport in Reading Pa., provide extensive support of helicopter inspections, repairs, overhauls, completions, reconfiguration and modification capabilities with complete services from aircraft painting, to interior appointments. Uniflight has expanded their support to include avionics capabilities in the 15,000 square foot facility at Rostraver Airport equipped with the latest technology in avionics repair, design, integra-

tion and installation. Uniflight will also send Avionics teams to their customer 's locations . AutoCAD as well as structural and electrical analysis are also offered services of Uniflight with comprehensive DAR and DER capability. Particular emphasis on reducing aircraft downtime with on time delivery is a widely known and well deserved reputation for the company. Uniflight offers solutions for customer aircraft evaluation, concept, design, implementation, flight test and final delivery. Military and civil helicopter customers around the world rely on Uniflight to continually deliver the finest helicopter services and support with unparallel customer satisfaction. Uniflight, 1-972-623-3444 or visit **www.uniflight.com**

Alpine Air Now Supporting AS365, EC155

Now celebrating 15 years of quality parts supply, Zürich, Switzerland-based Alpine Air Support is a stocking distributor for the Eurocopter AS365 and EC155 Dauphin helicopters. With notably long lead times and poor product support from the traditional OEMs, Alpine maintains a large pool of exchange components to keep Dauphin operators and maintenance centers supplied with rotable parts, instruments and avionics which can be shipped immediately to any worldwide destination. Alpine owns complete undercarriage sets, autopilot systems and all the associated electromechanical actuation equipment tagged by the factories such as Goodrich, Safran (Sagem Avionics) and Thales. Large fleet operators can now also benefit from Alpine's extensive consignment pool stocking arrangement which directly competes with the OEM's PBH schemes for only a fraction of the cost with far clearer visible overheads and instant availability. Alpine is quality approved to ASA-100 standard (FAA 00-56A). Alpine, 1-207-513-1921 (U.S.) and +41 (0) 52 345 3605 or visit **www.alpine.aero**

EuroAvionics Releases EuroNav7 SA System

The moving map and situational awareness system specialist EuroAvionics takes another leap forward. The Level C EuroNav7 system is the new benchmark in terms of airborne situational awareness (SA). The heart of the system is the all-new RN7 processor box that remains all legacy EuroAvionics configurability and flexibility to connect third-party avionics but which is perfected to offer the most performing, low-weight, low-power and low-cost certified platform for true on-board SA. In combination with the EuroNav7 application the highlights are the integrated HTAWS function, Dual-Head Graphics, ARINC708 interfacing for weather radar, HD video interfacing, internal DVR, 3D, optional JeppView module, etc. And, all developed as per Do-178B and Do-254 Level C to be really trusted. The next-gen RN7 computer with EuroNav7 SA application is a no-nonsense product that has already been selected by several helicopter and fixed-wing OEMs to enhance their aircraft's operational safety and mission efficiency. EuroAvionics, +49 (0) 72 31 58 6780 or visit **www.euroavionics.com**

FEC Heliports Add Crash, Rescue Equipment Lockers

The provision of crash and rescue equipment at helicopter landing sites is strongly recommended by civil aviation authorities. The supply of adequately stocked lockers is an appropriate precautionary measure to help prevent lives being lost if simple ancillary rescue equipment is not readily available when needed. In addition to all the necessary tools and safety equipment required, recommended practice is that at least two, positive pressure, self-contained breathing apparatus (SCBA) sets complete with ancillary equipment and reserve cylinders should be provided. At an elevated heliport, the rescue equipment should be stored adjacent to the heliport and be easily accessible. If your facility does not have crash and rescue equipment lockers, Heliportsequipment.com can supply them as either a complete package comprising of all the necessary tools and safety equipment as per recommended practices or individual items as needed. FEC Heliports, +44 (0) 1494 775226 or visit **www.heliportsequipment.com**

Russian Helicopters

China's new aircraft carriers could operate airborne early warning Russian Helicopters Ka-31s.

The Chinese and Asian military helicopter markets are ones that are double-edged for most western helicopter manufacturers (OEMs). While directly supplying the Chinese military is not a market that is open to them, the huge rise in China's economic strength and its subsequent renewed drive to modernize its military forces are giving many of its neighbors, who can buy from the western OEMs, the reason and impetus to do so.

But the expansion of the helicopter market in China is one that no international helicopter OEM can afford to ignore. From a mere 200 helicopters around the start of the century, some estimates have indicated a requirement for over 10,000 in all sectors by 2020. The limited but gradual opening of restricted airspace will be a major factor in dictating how fast this growth will occur. But private ownership, either by individuals or corporate organizations of fixed-wing aircraft and helicopters, not allowed up to 2003, is now fueled by the rise of independent wealth that is booming in the nation.

China has to date focused on its ability to build helicopters under license, although this is changing as its ambitions grow. The Harbin Aircraft Industry Co. has produced the Harbin Z-5 (a version of the Russian Helicopters Mil Mi-4), Z-9 (reproduction of Eurocopter's medium twin-engine Dauphin) and most recently the HC-120 Colibri in partnership with Eurocopter and Singapore Technologies.

The Changhe Aircraft Industry Company (CAIC) produces the Z-8 (Super Frelon), Z-11(AS 350 Ecureuil), S-92 and CA109. In 2008 AVIC II, through Changhe Aircraft, became a shareholder in Shanghai Sikorsky.

Making a recent debut appearance from CAIC is the WZ-10 attack helicopter which is reported to be operational with the People's Liberation Army (PLA). It is described as a battlefield/anti-armor helicopter with a secondary role of air-to-air. Its weapons systems are thought to include HJ-10 air-to-ground missiles, TY-90 air-to-air missiles together with a potential variety of unguided missiles. Its cannon can be varied between 23 mm to 30 mm, depending on the threat faced.

But China now has the economic power to establish its own indigenous military sector, and by using its financial muscle it can cut development

AMBITION AWAKENS IN ASIA

The Asian market, with China at its center, is one that western OEMs are reaching for, but China's military requirement is forcing it to seek internal growth.

By Andrew Drwiega, Military Editor

corners by working and partnering with western OEMs over civilian helicopter procurement and development, while educating its aerospace engineers who will fast-track the information into China's own military projects.

There is nothing that the OEMs can do about this as nobody wants to miss the opportunity of gaining the most revenue from China while in a position to do so—'making hay while the sun shines,' so to speak.

An indication of China's quest to improve its military capability seems to be confirmed by recent reports from Pakistan that the authorities gave Chinese engineers access to the remaining parts of the wreck of the allegedly 'stealthy' MH-60 Black Hawk that crashed during Operation Neptune Spear—the successful raid that led to the death of Osama bin Laden. Parts of the helicopter have also reportedly been taken back to China for further study.

There is emerging evidence that China has ambitions to take its indigenous products to the export market. Exhibiting under the collective grouping of 'China Defence,' 17 Chinese military trade enterprises and companies attended this year's International Defence Exhibition and Conference (IDEX) and Naval Defence Exhibition (NAVDEX) held during February in Abu Dhabi, capital of the United Arab Emirates (UAE). Within the variety of fighter and trainer aircraft and unmanned aerial vehicles was the Z-9 attack helicopter.

As an example of what might be to come, the unveiling of the first Chinese People's Liberation Army Navy (PLAN) aircraft carrier at the beginning of August, the 67,500-ton ex-Varyag (Admiral Kuznetsov class) bought from a shipyard in Ukraine, represents what could be the first step on the road to a Chinese carrier centric 'blue water' navy. Although this aircraft carrier can hardly match those of the U.S. fleet, there must be the first pangs of alarm at what might be in the future (up to four more carriers are thought to be planned).

In 2010, PLAN is reported to have acquired at least nine Russian Ka-31 airborne early warning helicopters, which could operate from these carriers. These helicopters may be fitted with a bar-shaped array radar and could be accompanied by airborne early warning (AEW) and anti-submarine

(ASuW) versions of the Changhe Z-8.

Deliveries of some of the latest civil helicopter types continue. Eurocopter has now completed the handover of four EC225s to the China Ministry of Transport's (MoT) Rescue and Salvage Bureau (CRS). This completes a 2009 contract for two additional EC225s, the first two having been delivered in 2007. The helicopters are all being used in the search and rescue (SAR) role, the latter two focusing on offshore SAR. The EC225s have been fitted with searchlights, weather radar, hoist and modern avionics.

At the handing over ceremony for the final helicopter on August 7, Bruno Boulnois, CEO of Eurocopter China emphasized the importance of sectors such as SAR within the Chinese market to Eurocopter: "Delivering the helicopters is just the first step; we will also be working closely with MOT/CRS in developing SAR technologies by sharing our technical know-how, as well as training flight personnel and operators, to build up a robust SAR network for the country."

The new Chinese WZ-10 attack helicopter from Changhe Aircraft Industries Corp.

Regional Round-Up

At the beginning of August, two Sikorsky MH-60S Seahawks were flown to the Port of Baltimore to begin their voyage to Thailand and serve with the Royal Thai Navy. These are the first MH-60S helicopters to be delivered to an international customer and were purchased through the Foreign Military Sales (FMS) program. The MH-60S will be used for utility missions and will join the Thai Navy's existing six S-70Bs and six marinized S-76B helicopters, also purchased under FMS in the late 1990s. The MH-60S helicopters are also equipped with a searchlight and rescue hoist allowing them to conduct SAR missions. The Thai Navy also has options on additional aircraft.

Earlier in the year the Royal Thai Air Force received three VVIP S-92 helicopters to be used for Head of State missions. As such they come equipped with LifePort medical systems. Delivered in April, the six-month training period will shortly end allowing the aircraft to enter daily service.

Another first for Sikorsky, as well as being the announcement that had been eagerly anticipated in the southern hemisphere, was the decision by the Australian government to select the MH-60R Seahawk as its new multi-role naval combat helicopter over NH Industries marinized NH-90. The Australian Defence Force will be the first foreign operator of the MH-60 Romeo and will operate a fleet of 24 of the helicopters. Again, the purchase is through an FMS agreement.

The Team Romeo selection (Sikorsky and Lockheed Martin) also includes

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engines from GE Aviation, sonar and sensor from Raytheon and a training simulation package from CAE.

"The MH-60R is a sophisticated sensor platform that has proven its ability to protect the U.S. fleet from submarines, ships and fast attack boats," said Dan Spoor, Lockheed Martin Aviation Systems vice president. "We are committed to providing the Australian fleet with the same advanced capabilities, as the U.S. Navy continues its investment in the aircraft." The acquisition of the MH-60Rs is part of the ADF's Air 9000 Phase 8 modernization program.

In Japan, one of the enduring images of the Fukushima nuclear power plant disaster following the earthquake and tsunami off the north eastern coast earlier in the year was the hugely brave but ultimately futile attempt by the crews manning one Chinook to overfly the badly damaged Unit 3 reactor and dump seawater on top in a bid to cool it. Four loads were delivered this way but most of the water was dispersed during the operation. There were questions at the time regarding why unmanned rotorcraft such as the K-MAX could not have been rapidly brought into the country to do such a job.

In the wake of that horrific experience Eurocopter has just announced that the Japanese Coast Guard will contract for three more EC225s, adding to the two helicopters that they purchased in 2006. These will be dedicated mainly to SAR and anti-piracy missions.

In Japan many military aircraft such as the Boeing CH-47 Chinook are built under license by a number of industrial OEMs such as Kawasaki Heavy Industries. Three more CH-47Fs are currently on order for the Japanese military. Fuji Heavy Industries has a license to build Boeing's AH-64D with the first being produced in 2006. The Apache was the aircraft selected to replace the Japanese Ground Self Defense Force's (JGSDF) 88 Fuji-Bell AH-1S Cobra attack helicopters. Although Boeing built the first Japanese Apaches (AH-64DJP) at its Mesa, Ariz. Facility, subsequent aircraft would be built in Japan.

Japan has been a reliable customer for AgustaWestland's AW139. In March this year Mitsui Bussan Aerospace, AgustaWestland's distributor in Japan received contracts for an additional seven AW139s from the Japanese Coast Guard, bringing the total ordered by the organization to 18 AW139s, with six scheduled to be delivered during this year.

At the end of 2010, Japan's Ministry of Defense (MoD) decided on new UH-60J helicopters, built under license by Mitsubishi Heavy Industries (MHI), to replace its fleet of 40 older MHI-built MH-60Js operated by the Japan Air Self-Defense Force (JASDF) in a military SAR role. The one-for-one replacements will be phased in over 20 years in a program worth around $2.3 billion (190 billion yen). The new model will incorporate a removable aerial refueling probe to allow tanker refueling, as well as satellite communications and a collision avoidance system.

In December last year the Malaysian Maritime Enforcement Agency (MMEA) took delivery of the final aircraft of three AW139s ordered back in October 2008. They will be used in the agency's daily tasks that include SAR, coastal patrol and law enforcement operations along Malaysia's huge coastline.

At the Paris Air Show in June, Eurocopter and signed a cooperation agreement with the Malaysian Ministry of Defence (MoD) to strengthen the country's aeronautical skills and training. It is linked to Eurocopter's supply of 12 SAR-configured EC725s which were selected by the Malaysian government for the Royal Malaysian Air Force to replace its old S-61 Nuri helicopters.

The agreement includes: a civil/military joint venture for a regional EC725/EC225 full flight simulator that will be open to regional Asian operators of the types; the development of a maintenance repair and overhaul centre for the government fleet; the integration of Malaysian industry into the Eurocopter Global Supply Chain and the creation of an aeronautical training centre.

Boeing's penetration of the region regarding its Chinook program and upgrades includes the Australian Defence Force where there is a campaign to provide seven new CH-47Fs to replace the existing five CH-47Ds (there were six but one crashed in Afghanistan in May). Other countries with CH-47Ds include Thailand, six; Taiwan, eight CH-47SDs; Japan, 69 Kawasaki-built CH-47Ds with three CH-47Fs on order; and Korea with 23 CH-47Ds and five HH-47Ds – a Search & Rescue (SAR) version featuring large fuel tanks and nose radar.

AW139 for the Japanese Coast Guard.

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Bell AH-1Z Viper with Marine Medium Helicopter Squadron 268 (Reinforced), lifts off from the amphibious assault ship Makin Island on August 14 to support a counter-piracy training mission.

With the continued need for wartime lift, funding for existing military and paramilitary rotorcraft programs is assured, according to military experts. But what about funding for future programs?

By Robert Moorman

Makers of military rotorcraft are understandably nervous these days with the real possibility of up to $700 billion in defense-related cuts between now and 2023. Add in the recent credit default showdown and trillions in anticipated budget cuts from the so-called Congressional "super committee," and the uncertainty increases. But the anxiety could be unnecessary, according to several industry experts.

"Rotorcraft programs are probably in better shape than almost any other category of combat systems in the current fiscal environment," says Loren Thompson, chief operating officer for the Lexington Institute, a conservative think tank. He says the programs are being funded "robustly" with a clear understanding of the "utility that helicopters bring to current war fighting."

Thompson is not alone in his positive assessment of helicopter programs within the U.S. Department of Defense (DoD). While the U.S. government's military spending as part of NATO is expected to decline to around 39 percent by 2015 according to a Council on Foreign Relations survey, DoD spending on military rotorcraft programs is not expected to drop appreciably because of the ongoing need for vertical lift and to replace equipment lost in the Iraq and Afghanistan wars.

"It is all about maintaining force mobility and replacing what was worn out," says Richard Aboulafia, vice president of analysis for the Teal Group.

It is also about ensuring that helicopters remain an integral part of all branches of the U.S. military, which has three main roles—war fighting, nation building and counterinsurgency.

"Helicopters are at the center of all three," Aboulafia says. "They have strategic relevance."

Meaning, there is an ongoing need for numerous production rotorcraft, including the Boeing AH-64 Apache, Sikorsky UH-60M Black Hawk, Boeing CH-47F/G Chinook, Bell Boeing V-22 and Bell UH-1Y Super Huey, which is replacing the Marines aging fleet of UH-1Ns.

Funding for the Apache and Chinook programs "will likely be safe from budget cuts, with some tweaking at the edges regarding yearly purchases," says Ron Jaworowski, senior aerospace analyst with Forecast International. "The same is true with the Sikorsky Black Hawk UH-60Ms." The U.S. Army is looking to buy hundreds of UH-60Ms over the next several years.

Another reason why rotorcraft programs appear Teflon-protected can be explained by examining the type of aircraft DoD procures. Many of the

WITH DEFENSE CUTS EXPECTED, ARE MILITARY HELICOPTER PROGRAMS *SAFE?*

USMC/Gunnery Sgt. Scott Dunn

newer models are, in fact, approved derivatives or new builds of older aircraft. The UH-60M, which was a refurbishment program initially, is now a new Black Hawk, while the CH-47F is a new Chinook.

[There are three categories of aircraft being delivered to the military. A remanufactured aircraft is an older airframe that is stripped down and refurbished with new components. A "renew" is new airframe with rebuilt components. A "new-build" is a brand new, existing aircraft, not a new aircraft.]

With the exception of the V-22, which first flew in 1989, the Pentagon tends not to buy "clean sheet designs," says Jaworowski, adding that this trend will continue for the foreseeable future.

The AH-64 Apache remains the primary attack helicopter for the U.S. military. So funding the latest variant and upgrades to older Apaches is likely assured, but delivery numbers could drop, according to sources close to the program. As of early August, the $619-million system development and demonstration (SDD) contract signed in mid-2006 between Boeing and the U.S. Army for the AH-64 Block III program remains intact. The contract for low rate initial production (LRIP) was awarded in mid-2009.

Deliveries of the first Block III Apaches are scheduled to begin in October 2011. The Block IIIs include extended range radar capability and more powerful General Electric 710D engines.

Funding for upgrades to all Block I and II Apaches is also expected, according to Boeing. Around 937 AH-64As were built for the U.S. Army (821) and international customers (116). Many of the Army's Apaches have been upgraded to D variants. Around 780Ds were produced, according to Boeing.

Elsewhere, the state of military rotorcraft programs look good. The Navy's MH-60R (Romeo), which is slated for anti-submarine warfare and maritime patrol, as well as Nighthawk, a supply aircraft, are now in full pro-

U.S. Army/Staff Sgt. Sarah Bielstein

Boeing AH-64 Apache with the 101st Combat Aviation Brigade, Task Force Destiny shown during an escort of a CH-47 Chinook from Forward Operating Base Tarin Kowt to Kandahar Airfield in Afghanistan.

duction. The Navy has ordered 373 of the MH-60R and S models out of the Program of Record (POR) for 575 rotorcraft. The Navy is expected to order the remaining 202 in the next multi-year purchase agreement of Seahawks and Black Hawks expected sometime in 2012, according to a company spokesman.

"There is decent money for rotorcraft now, but this is mostly for remanufacture or further production of 30-year-old designs," observes one industry expert.

The Bell Helicopter AH-1Z for the Marines is the latest variant of the helicopter that first entered service in the late 1960s. In the fiscal year 2010 budget, AH-1Z new build production aircraft cost $28.994 million, while remanufactured or refurbished aircraft cost $25.652 million, according to the Teal Group's September 2010 analysis of the program. The plan is to produce 61 new AH-1Zs, according to Bell.

The Marines also intend to acquire 200 copies of the Sikorsky CH-53K, the latest variant of the heavy lift helicopter. At this juncture, it is unknown if the orders will be paired down.

Some rotorcraft OEMs declined to comment on the status of their military rotorcraft programs because of sensitive negotiations with DoD on revised number of deliveries over the next several years. Sikorsky is involved in negotiations with DoD/Navy on future deliveries of Black Hawks, according to sources, but the company's military programs officials were unavailable for comment.

Bell Helicopter military executives declined an interview but released the following statement from Robert Hastings, senior vice president of communications: "As the current budget negotiations are ongoing and the extend and nature of DoD budget impact is undetermined, it is inappropriate to comment until we see the final numbers and understand their impact However, we remain optimistic."

USMC's requirement for 360 MV-22s and the 50 CV-22s for the Air Force Special Operations Command is still current. More than 180 V-22s have been delivered to the military through May 2011. Currently, 145 V-22s are in flight service, according to the Naval Air Systems Command.

Chinooks

The Chinook, which first flew in September 1961, is now in its third and fourth generation. At present, the Army POR is for 464 CH-47Fs. Deliveries began in 2006 with 137 Fs delivered so far. The full requirement is for 246 F model "renews" and 218 "re-builds," according to Boeing.

The 61 remanufactured CH-47Gs (MH-47Gs) to support the Special Operations Forces were delivered and deployed in February 2011, but the Army increased the requirement by eight aircraft. Those eight G models will be delivered by January 2015.

Both the V-22 and Chinook are in the midst of multi-year contracts. "Funding for both programs has been consistent throughout and indications are they will be fully funded for 2012," says Mark Ballew, director of business development for Army and special operations programs at Boeing's Mobility division. "Both programs are also working on a second multi-year program to be awarded in FY 2013," he adds.

On the status of the AH-1Z Cobras earmarked for the Marines, the H-1 upgrade POR remains 349 AH-1Z and UH-1Ys, 189 AH-1Zs and 160 UH-1Ys. But those numbers could change.

While newly designed military rotorcraft is out of the question in the present environment, "there is a lot of commercial off-the-shelf technology that is more capable than the legacy fleet the military now operates," says Dan Hill, vice president of strategy and federal business development for AgustaWestland. "This is an area at which Congress and DoD should be looking."

AgustaWestland is offering its AW139M for the Air Force Common Vertical Lift Support Platform (CVLSP) program. Whatever rotorcraft is chosen will replace the Bell UH-1N. Total funding for this five-year program is $4 billion, for 93 aircraft as outlined in the President's budget. Fiscal year 2012 funding for CVLSP is $59.23 million, which pays for 22 aircraft.

AgustaWestland is offering its AW119 as a replacement vehicle for the U.S. Army's 2008 cancelled ARH-70 armed reconnaissance helicopter program. The ARH-70 was originally envisioned as a replacement for the Bell OH-58D Kiowa Warrior.

The Army's Aerial Scout (AAS) requirement, as it is now known, has several suitors: the Boeing AH-6S, Sikorsky S-97 Raider and an upgraded Bell OH-58D Kiowa Warrior. But various sources claim that AAS will never fly, saying that the requirement would be absorbed by the Army's Joint Multi-Role (JMR) program, which is expected to use one design for a family of rotorcraft. But JMR remains in the conceptual stage with very little money

expected to be allocated toward the effort until 2020. While most rotorcraft programs appear to be safe, some budget cutting is expected. According to several sources, 48 V-22 Ospreys earmarked for the Navy will likely be formally cancelled. No surprise there. The 48 tiltrotors remain part of the POR, but are not funded. The Navy never found a viable role for the aircraft, although the V-22 Joint Program Office argued that it could fill a search and rescue (SAR) role. As to the on-again, off-again Presidential Helicopter program, OEMs and vendors anxiously await the publication of the Navy's analysis of alternatives (AOA) on how to replace the aging fleet Sikorsky VH-3Ds with readily available off-the-shelf equipment. At present, there is no budget for a new fleet of Marine One helicopters, much less a prototype. In the present climate, it is unlikely that DoD will commit to a new fleet of Marine One helicopters.

Future Requirements

Funding for current military rotorcraft programs might be assured for now, but the Defense Department has yet to come up with a viable plan for developing and funding next-generation helicopters, despite a lot of talk about the need for speed.

"The Pentagon has made it very clear that high speed will be the priority in the next generation of rotorcraft," says Jaworowski. That may be, but OEMs are, for now, footing the research and development (R&D) bill for these faster, composite-filled rotorcraft.

Consider the 250-knot capable Sikorsky X2, and offshoot military design S-97 Raider, or the Eurocopter X3 and X4, or Piasecki Aircraft's X49. Some of these designs are being offered for the Army's JMR program.

Sikorsky invested around $50 million in its X2 technology demonstrator and is planning to spend another $100-million-plus for two S-97 prototypes, according to the American Helicopter Society (AHS). "The Defense Department needs to reverse the effects of more than 25 years of inadequate investments in rotorcraft technology," says AHS Executive Director Michael Hirschberg. What little R&D being funded by DoD are "band-aid solutions rather than new designs," he adds. Congress is getting the message—sort of. It directed DoD to create a Strategic Plan for the Future of Vertical Lift. But without funding, it is a plan without substance.

In 2008, the Aerospace Industries Association published a report on the defense industrial base. One chapter, devoted to helicopters, painted an unflattering portrait of DoD's lack of a cohesive strategy on developing and acquiring next generation rotorcraft. And it hasn't gotten much better.

Buying or refurbishing what is in the fleet is significantly easier in a climate of shrinking military budgets. But this dilemma of how to move into next generation rotorcraft is more than just a lack of funding. What's needed is a change of mindset.

"The perception coming out of DoD is that rotorcraft technology has gone about as far as it can go, and there is no real point in investing in the next generation of speed and capacity," said one expert, who preferred to remain anonymous due to his position within the U.S. government.

Another factor worth noting: "There isn't a market yet for next generation technology, because the military operations and tactics are set up for the current level of rotorcraft technology," he added.

In the past, benefits from new military equipment and systems worked their way down to the civil market eventually. But that transfer of technology is no longer assured. The drivers for commercial success of rotorcraft are fuel efficiency and owner-operating costs, while the military's pressing need is for speed, lift capacity and survivability.

"Until that paradigm changes, there isn't motivation for the trickle-down technology to happen," noted the expert.

Sikorsky MH-60S Sea Hawk with the Wild Cards of Helicopter Sea Combat Squadron (HSC) 23 delivers supplies to the aircraft carrier USS Ronald Reagan in early August.

U.S. Navy/Charles D. Gaddis

Helicopter related R&D across the board is likely to feel the budget axe, despite the pressing need to advance the technology for new airframes, systems and engines. For the foreseeable future, there will be a contraction in funding for every facet of military spending, including benefits and size of the various services. "But R&D will be hit first and hardest," Lexington Institute's Thompson predicts, "because research typically is an orphan in the budget process."

While R&D could be threatened, the upgrades to legacy rotorcraft and steady orders for existing models in the DoD fleet appear to be safe. Some analysts see an integral part of rotorcraft modernization that outstrips progress made in other categories of war fighting systems. Others view this funding pattern as a shortsighted stopgap measure that risks the lives of those on the battlefield.

OPERATOR PROFILE: HONG KONG GF

Hong Kong Government Flying Services operates four Eurocopter EC155s and three AS332 Super Pumas as part of a mixed fleet.

Hong Kong invokes different images to many people, especially if you've not had the chance to visit this beautiful place. The terrain is as striking as it is diverse with steep, green mountains, blue ocean and numerous islands intermingled with a breathtaking ultra-modern urban landscape of glass and steel, not to mention having its own Disneyland. What's the best way to get around? There are no shortage of wide-body aircraft, including the new A380s, flying in and out of Hong Kong day and night. Locally, people travel by car, high-speed trains, ferries, double-decker buses and, of course, helicopters!

By Chris Baur

Photos by Chris Baur

Capt. Victor Lau expla
mission of Hong Kong
organization's Operat

Government Flying Service helicopters sitting on the tarmac at Hong Kong International Airport (HKG).

Protecting the citizens and many visitors of Hong Kong—heavily populated and dispersed among many islands—is a formidable task. Hong Kong has a unique flying operation that traces its origins to an Auxiliary of the British Royal Air Force. Formed in April 1993, the Hong Kong Government Flying Service (GFS) is based at the busy Chek Lap Kok Hong Kong Intl Airport (HKG), located on Lantau Island. Led by controller, Capt. Michael Chan, the Government Flying Service consists of approximately 225 members across five divisions—Admin, Training/Standards, Operations, Engineering, and Quality & Flight Safety.

During a recent trip to Hong Kong, I received an invitation to GFS headquarters and met with several pilots and officers. Over a cup of tea, Capt. Tom Tang and Captain Victor Lau explained the formidable mission of the Government Flying Service, which is responsible for covering an area that extends out to 1,300 km, covering most of the South China Sea. The GFS provides airborne search and rescue using helicopters and fixed-wing aircraft. It has agreements in place to use a system of offshore helicopter platforms and airports for refueling to extend the range of all its aircraft. Currently the GFS fleet consists of the following aircraft: four Eurocopter EC155-B1 Dauphins; three AS332-L2 Super Pumas; two Jetsteam J41 turboprops and a ZLIN trainer.

The EC155s are the GFS multi-mission workhorse, providing air ambulance, SAR, firefighting and law enforcement missions. The Dauphine provides an internal security/counter terror mission, and can support surface vessel fast boat operations with airborne assault troops. The nimble twin-engine helicopters have the ability to land at a network of heliports strategically located throughout Hong Kong.

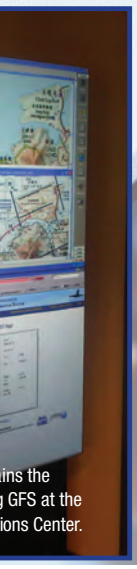
Long range SAR is accomplished by the AS332-L2s, which can also be equipped with a Simplex Fire Attack water tank and bucket system that attaches to the bottom of the aircraft. It can carry 2,270 kg of water for aerial firefighting. The helicopter is also outfitted with a primary and standby hoist system. The benefits of this backup are obvious whether operating in the South China Sea, evacuating an injured crewmember from a vessel, or rescuing firefighters from a burning hilltop.

The two Jetstream J41 fixed-wing turboprops also serve many roles for GFS, ranging from searching for survivors during maritime rescue operations to aerial monitoring of windshear and turbulence around the airport. During long-range SAR missions, the Jetstream aircraft can also scout ahead for weather conditions as an aid to determine suitability for helicopters hoisting or "winching" operations.

To support the wide range of missions, the Government Flying Service has developed a system of equipment trolleys that are outfitted with mission-specific gear. This allows the aircraft and crews to reconfigure quickly for various assignments. GFS does not use a SAR "basket" device for hoist operations, preferring to use either a collar or litter device. I was impressed with their communications protocol, supported by the delivery of a two-way hand held radio, protected inside a shock and waterproof container with simple instructions for use. Once delivered, the radio allows the vessel or survivor to communicate directly with the GFS aircraft. The safety benefits of expedient and direct communication between the vessel and aircraft are significant, reducing the probability of hoist-related injuries or a fouled/sheared cable due to misunderstanding and confusion. It can also reduce the amount of time the aircraft spends in hover flight over the vessel during tag/trail line operations.

In 2008, GFS assisted the mainland rescue and recovery efforts following the 8.0-magnitude earthquake that struck the Sichuan Province in China, resulting in the deaths of more than 68,000 people. On May 17 of that year, a five-member team consisting of Jetstream 41 pilots and aircrew deployed to Chengdu to assist in the air relief operation. Six days later, a SAR-configured GFS Super Puma self-deployed the 1300-km trip from Hong Kong to Guanghan. It was a pivotal decision as the benefit and utility of including helicopters in the response to this disaster helped save lives. GFS crews were able to deliver essential supplies, water, and medical evacuation services to the sick and injured from the mountainous region of northern Sichuan, including Beichuan, Maoxian, Qingping and Mianzhu. Much of these areas were completely inaccessible without the utility of the helicopter.

The operations challenged the deployed GFS crews as they found themselves working in an unfamiliar location with limited resources for mission planning and aircraft maintenance. Working long hours, living in tents and preparing meals over an open fire between sorties while enduring a 6.0 aftershock were just some of the difficulties that the GFS team faced. There had been two occasions where other relief forces were sent by the control center to recover casualties from a 100-foot-deep valley covered with collapsed cables. They attempted this formidable task but failed, so the GFS team was called in. By applying some special techniques, the crew flew the helicopter backward and made their descent foot-by-foot through spider-web like cables before lifting all stranded survivors to safety. Since these two incidents, the team is always entrusted with difficult rescue missions. This is



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ions Center.

indeed a manifestation of their position in the air relief operation, as well as recognition of professional skill and quality performance.

The GFS team was also tasked with preparing a list of recommendations, based on their experiences:

• Obscure environment. Maps were no longer reliable as the topography of the earthquake areas had changed.

• Numerous aircraft. Air traffic was heavy over some of the search areas.

• Perilous terrain. Most of the rescues took place in deep valleys covered by almost invisible cables, sometimes even along steep slopes and cliffs.

• Thin air at high altitude. All rescue operations were carried out over mountainous regions at 7,000 feet asl.

• Changing weather. Clouds and fog formed rapidly in the mountainous regions due to extreme weather.

• Inadequate support. As facilities and equipment were limited, the engineering staff responsible for inspections before and after each flight worked under enormous stress and challenges.

Hong Kong GFS played a prominent role in the entire air relief operation in Sichuan. Despite taking on the extra duty, the GFS mission in Hong Kong was never compromised. During the first 21 days following the earthquake, the deployed team flew 26 missions in the battered Sichuan Provence, recovering a total of 96 survivors and transporting over eight tons of food and essential supplies to the affected victims. This was accomplished with a cadre of 16 flight crews and four aircraft engineers. This could only have been accomplished by a team of professionals dedicated to the art and fraternity of SAR.

Capt. Tom Tang has conveyed that the "actions taken by the GFS has far-reaching and profound meaning, we have, on behalf of the seven million residents in Hong Kong, conveyed the earnest care to those in distress in Sichuan. Though the support rendered is limited, the heart for it sees no bounds."

Given the variety of complex missions, aircraft differences and area of responsibility, GFS requires a state-of-the-art communications system. GFS has an impressive Operations Center, staffed 24/7 by pilots and flight officers. It features a host of electronic message boards, providing quick and easy access to scheduling, maintenance, aircraft status and mission tracking. The electronic flight and maintenance system provides information throughout the facility. This includes a sophisticated real-time aircraft tracking system that can be accessed from any workstation.

Avionics equipage of the AS332-L2 Super Puma consists of the standard Eurocopter avionics suite, with the addition of a CMA 3000 multi-sensor navigation system. This provides the

mission-specific SAR mode with mark on target, transition down and automatic hover functions was included in this system. Like the Super Puma, the avionics package for the EC155-B1 consists primarily of the Eurocopter-provided avionics suite. Besides the standard VHF navigation unit, a Trimble 2101 GPS unit was also installed for improved navigation.

The pilots are a close-knit mixture of mostly local and some ex-pat pilots. While attrition is very low, GFS created a Cadet program for future pilots. Typically, more than 4,000 applicants are competing for a handful of positions. Although it is not required, successful pilot applicants typically possess a university degree, and successfully complete a rigorous screening process consisting of a battery of tests and interviews. Once selected, cadets spend 18 months away from Hong Kong for basic flight training. The newly hired cadets incur a 10-year commitment to the Hong Kong government for the highly specialized flight and mission training and also receive generous pay and benefits from their date of hire.

Pilots are tracked towards either the helicopter or fixed-wing aircraft. Helicopter pilots typically fly both the Dauphine and Super Puma, while the Jetstream pilots are focused on fixed-wing flying. In order to enhance operation flexibility, several pilots are both fixed-wing and rotorcraft qualified. But normally, they would not maintain simultaneous currency in both types. Pilots are tracked as both co-pilots and captains through four levels of qualification— day non-tactical, day tactical/SAR, night non-tactical and night tactical/SAR. After a copilot successfully completes all four levels, they begin the process of qualification as a captain from Level 1 through successful completion of Level 4. This rigorous training program has supported GFS' demanding operations tempo and challenging missions with highly qualified pilots and a low accident rate.

Recognition of GFS' excellent SAR capabilities is reflected in the many awards it has received over the years, including the Sikorsky Aircraft Rescue award; *Rotor & Wing* Helicopter Heroism award; and the Igor Sikorsky award for Humanitarian Service.

If you ever have the opportunity to visit Hong Kong, you won't be disappointed by the warmth of the people, culture and beautiful scenery. The capabilities of GFS offer a tremendous value to the residents and visitors in and around Hong Kong, and serve as a model of public service aviation for other federal, state and local governments. The Hong Kong Government Flying Service, unique as Hong Kong itself, continues to grow and provide a much-needed service.

Bell 412 featuring BLR Aerospace's FastFin tail rotor enhancement and stability system.

BLR Aerospace

By Dale Smith

If you were lucky enough to join the nearly 20,000 other heli-fans at this year's HAI Heli-Expo in Orlando, you got to experience a seemingly endless array of new avionics, systems and components. And, like most, you no doubt left the show floor dreaming of flying home in one of those showroom fresh helicopters with full glass and a host of other performance upgrades.

But, alas, only a very fortunate few ever get to sign on the proverbial "dotted line." That's okay. There are plenty of aftermarket products and systems available that will enable operators to greatly enhance the safety, capabilities, performance and maintainability of in-service helicopters without breaking the bank.

There are literally hundreds of FAA supplemental type certificates (STCs) for upgrades covering everything from door latches to complete engine swaps. While it's impossible to cover them all, the following represent a selection of 10 recent "engine to tail, avionics to blades" STC upgrades to provide an idea of what is possible. Who knows, this may be the first step in making your operation's helicopter the envy of every other pilot on the airport.

Airwolf Aerospace Robinson Blade Tape

There are thousands of Robinson R22 and R44 operators around the world, and many of them are concerned about an FAA airworthiness directive (AD) for a blade delamination issue. Airwolf

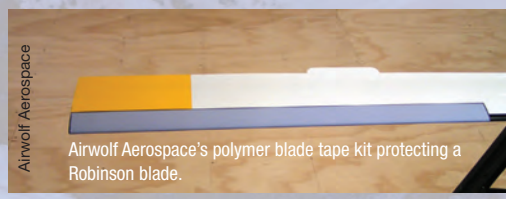
THE SUPPLEMENTAL TYPE

With all the numerous FAA supplemental type certificate (STC) modifications available on the market, it can be a challenge to distinguish the most important updates that offer value for price. We surveyed a handful of recent STC offerings to provide a snapshot of various upgrades that can generate additional performance, increase safety and maximize efficiency from the helicopters already in your fleet.

Aerospace has received an FAA STC for a new polymer blade tape kit that helps protect the blades from delaminating. The Airwolf kit is an Alternate Method of Compliance (AMOC) with the new AD.

The blade tape kit covers one-half-inch beyond the bond line on the inboard 36 inches of the main rotor blade and keeps dirt and moisture from entering the bond area. The tape is not a permanent fix. When it starts to wear out, it will make a whistling noise as the main rotors spool down. The old tape is simply replaced with a new set.

The company stresses that the tape kit is not a "fix" to a delamination/debonding situation. Once the blades delaminate, the only thing that can be done is to replace the main rotor blades.
More: www.airwolfaerospace.com


Airwolf Aerospace

Airwolf Aerospace's polymer blade tape kit protecting a Robinson blade.

Aspen EFD1000H Flight Display

The EFD1000H Pro primary flight display (PFD) is the newest addition to the Aspen Avionics series of compact electronic flight displays. One of the things that differentiates Aspen's solution from other glass upgrades is that the units fit into the standard three-inch analog instrument positions, so there is little or no need for panel modifications. The system can be installed in one, two or

three display configurations, depending the operator's need.

The EFD1000H's compact instrument "cans" feature the built-in solid-state attitude and heading reference system (AHRS), emergency GPS and 30-minute backup battery.

Designed for the rigors of helicopter operations, the standard EFD1000H provides both an electronic ADI with easy to read altitude and airspeed displays and an HSI with moving map, GPS flight plan legs, waypoints, navaids and airports. The unit is also compatible with a variety of satellite weather and traffic systems. It can also be integrated with helicopter terrain awareness and warning system (HTAWS) sensors to display surrounding terrain and obstacles.

The Aspen EFD1000H is currently STC'd on the Bell 206, 407 and Eurocopter AS350. The company is also pursuing STCs on other rotorcraft types.

More: **www.aspenavionics.com**

Bell, Uniflight RR500 Engine Upgrade

While it won't be available until sometime in 2013, one of the more exciting developments—especially for Bell 206B and 206L owner/operators—is the recently announced program by Bell Helicopter and Uniflight to swap the aircraft's current engine with a new Rolls-Royce RR500. According to the companies, the program will deliver a number of performance improvements, including up to 61 additional shp, cooler starts, lower operating costs and "significantly improved high altitude and hot environment performance."

Along with the new engine, Uniflight and Bell are also working toward an STC for a new engine monitoring unit, a generator control for cooler starts, 12 g-load engine mounts, a fire detection system and new cowling design.

More: **www.bellhelicopter.com** or **www.uniflight.com**

Cockpit view of the Max-Viz EVS-1500 enhanced vision system.

BLR FastFin Tail Rotor Enhancement

BLR Aerospace's FastFin tail rotor enhancement and stability system does a lot more than make your trusty old Bell helicopter look cool—it delivers a real performance boost. FastFin modifies the stock tailboom with new dual tailboom strakes and a reshaped vertical fin, according to the company. This new design optimizes airflow in a way that delivers a dramatic increase in tail rotor efficiency. FastFin reuses energy from the main rotor wash to aerodynamically enhance the anti-torque available for hover operations.

According to the company, operators are able to "safely hold a hover at high altitudes and high temperatures that were unmanageable without the enhancement." The BLR Aerospace system is currently available for Bell 204, 205, 206, 212, 412, Huey II and most UH-1 models.

More: **www.blraerospace.com**

Cobham HeliSAS Stability Augmentation System

Cobham's recently STC'd HeliSAS brings a higher level of safety and capability to light and medium-sized helicopters. Featuring a two-axis autopilot and a stability augmentation system, the compact and lightweight system is designed to provide precise control during all modes of flight, regardless of wind conditions or shifts in weight.

Robinson R44 outfitted with Max-Viz EVS-1500.

The system is engaged at all times. The pilot switches it "on" prior to take-off and "off" after landing—everything else is automatic.

While HeliSAS offers operators a host of operational benefits, the company offers two two of the highlights are the system's capability to enable hands-off flight, and in an instance where the helicopter is flown into an extreme attitude, to return the aircraft to a near-level condition. In the latter, all the pilot needs do is to release the cyclic (with HeliSAS engaged), and the unit will do the rest. FAA has granted STCs for Cobham's HeliSAS on the Bell 206B/L, 407 and the Eurocopter A350.

More: **www.helisas.com**

Donaldson Engine Inlet Barrier Filter System

Donaldson Aerospace & Defense has recently received an STC for its inlet barrier filter (IBF) system for the AgustaWestland AW109 Power and Grand. Like the company's other IBFs, this new system helps cut operating and maintenance costs by reducing engine damage from dust, dirt, moisture and foreign object ingestion.

Developed with AgustaWestland's assistance, the IBF's streamlined conformal filter assemblies mount to the existing engine cowl on each side of the helicopter. The upgrade includes Donaldson's alternate inlet air bypass system, which is mounted within the AW109's upper aft fairing.

The installation also features a new access panel for easy pre- and post-

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flight inspection of the IBF by pilots and maintenance personnel. Donaldson provides IBF solutions for a growing number of helicopters including AguataWestland, Bell, Eurocopter, MD Helicopters, in addition to some Soloy and Honeywell engine conversions.
More: www.donaldson.com

Max-Viz EVS-1500 Enhanced Vision System

Any operator who flies missions that require low altitudes and visibility should take a good look at the EVS-1500 Infrared Enhanced Vision System (EVS) from Max-Viz. The EVS-1500 uses a lightweight, solid-state thermal camera with advanced image processing to deliver a high-contrast, "daylight" type image to the pilot in day or night, and thorough brownouts, smoke, haze, smog and light fog.

According to the company, the EVS-1500's video outputs are compatible with the majority of popular cabin avionics multifunction displays. Or it can be used with a dedicated stand-alone panel-mounted or portable display.

Max-Viz currently has STCs for many helicopters, including the AgustaWestland A109E, Robinson R-4, Bell 206, 407, 212 and 412, Sikorsky S-76 and Eurocopter EC135/145.
More: www.max-viz.com

Sandel HeliTAWS ST3400H

Vista, Calif.-based Sandel Avionics recently received an STC for its ST3400H helicopter terrain awareness and warning system (HeliTAWS) for the Bell 412EP. Along with high-resolution, 3D terrain and Class A TAWS displays, the ST3400H also features Sandel's WireWatch wire-strike avoidance technology that alerts the pilot when approaching known wires, transmission lines and obstacles. Another feature is Sandel's TrueAlert technology, which enables operation at low altitudes without triggering nuisance terrain alerts. The ST3400H also has built-in traffic display capabilities with interfaced with compatible TCAS, TAS or TCAD systems. Featuring a built-in radar altimeter, the ST3400H is a direct drop-replacement for most RadAlt display units.

In addition to the Bell 412, the Sandel ST3400H is also approved for installation on the Sikorsky S-76, Eurocopter AS350 and AgustaWestland AW109.
More: www.sandel.com

Van Horn Composite Tail Rotor Blades

If you're operating a Bell 206/OH-58 in an area where noise is an issue—and who isn't—you'll want to take a look at Van Horn Aviation's composite tail rotor blades. According to the company, FAA-approved acoustic testing data shows a 40 percent drop in a 206's overall noise compared to the OEM tail rotor blade. In addition to lower noise, the unique airfoil design of the composite tail rotor blades also helps to increase the aircraft's tail rotor authority, especially in hover and at low speeds and higher altitudes.

Featuring corrosion-resistant construction and a titanium root fitting, VHA's tail rotor blades are also rugged—their 5,000-hour service life is twice that of the OEM tail rotor blades they replace. Van Horn has received both FAA and Transport Canada STCs for the replacement blades on most Bell 206/OH-58 helicopter models.
More: www.vanhornaviation.com

Vector Aerospace S-61 Sagem Cockpit

In March 2011, FAA granted an STC to Vector Aerospace Helicopter Services-North America for the installation of an integrated cockpit display system (ICDS) and attitude and heading reference system (AHRS) on the Sikorsky S-61.

The upgrade involves four Sagem Avionics displays supporting the engine and caution systems, two Rockwell

Van Horn composite tail rotor blades lower noise levels.

Collins AHRS and primary function displays, as well as flight-critical avionics from Garmin, L-3 Communications and Aerospace Optics. Vector also worked with Carson Helicopters to develop the S-61 upgrade, which is certified for dual-pilot IFR, Category A and B operations.

Vector holds STCs for cockpit modifications on various types, including the Bell 205/206 and 407, Eurocopter AS350/355, Heli-Lynx 355FX and Sikorsky S-76.
More: www.vectoraerospace.com

Video Monitor from Flight Display Systems

Alpharetta, Ga.-based Flight Display Systems' Flipper allows operators to easily add a five-inch, high-resolution video monitor to their cockpit without the cost of reworking the entire instrument panel.

Designed specifically for the helicopter market, the hinge-mount Flipper can also be installed on the glareshield or sidewall. The display swings out up to 150 degrees from its stowed position. When not in use, the unit stows flush against the mounting plate.

Flight Display Systems makes the Flipper in five-, seven- and 10-inch models, all of which accept composite and VGA display inputs for displaying items such as enhanced vision, video or satellite weather.

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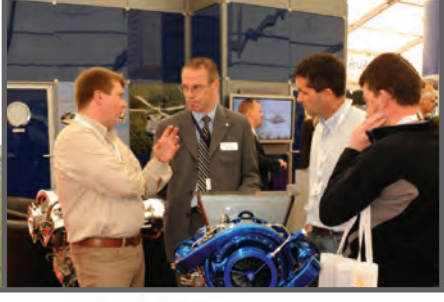

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October 2011:

HEMS Regulations for Public Use Operators—Law enforcement, firefighting and other public-use operators are wondering how the ongoing evolution of FAA's regulations for helicopter emergency medical services (HEMS) will impact them, and whether any changes will encompass the police/fire entities that conduct HEMS work. Frank Lombardi addresses some of the well-meant, yet controversial ideas from law enforcement agencies that are hoping they will not have to comply with tighter regulations on HEMS operations.

We Fly the Bell 407GX—Bell Helicopter recently invited *Rotor & Wing* to evaluate the Garmin G1000H flight deck as part of its new 407GX, which was unveiled earlier this year in March during Heli-Expo. Editor-at-Large Ernie Stephens supplies this exclusive *Rotor & Wing* pilot's perspective.

Columns—Leading Edge, Frank Lombardi; Safety Watch, Terry Terrell; Offshore Notebook, Pat Gray; Military Insider, Andrew Drwiega; Helicopter Safety & Training; and Around the World.

Bonus Distribution: AUSA Annual Meeting, Oct. 10–12 in Washington, DC. NBAA Annual Meeting & Convention, Oct. 10–12 in Las Vegas, Nev. Air Medical Transport Conference (AMTC), Oct. 17–19 in St. Louis, Mo.

November 2011:

Military Insider—A special supplement to the October issue will examine two very similar helicopter upgrade programs from two different continents. Andrew Drwiega looks at a European-based initiative to upgrade the substantial worldwide fleet of the venerable Eurocopter Gazelle, and Douglas Nelms provides an in-depth look at the Bell OH-58 "A2D" conversion program for the U.S. Army. New glass, powerplants, transmissions and blades—not to mention the implementation of all the latest sensor technology—are stretching the service lives of these mature airframes far beyond what anyone imagined even just a few years ago.

Columns—Danger Zone, Lee Benson; Law Enforcement Notebook, Ernie Stephens; Technology Today, Chris Baur; Military Insider, Andrew Drwiega; Public Service; and Around the World.

Bonus Distribution: Interservice /Industry Training, Simulation and Education Conference (I/ITSEC), Nov. 28–Dec. 1, Orlando, Fla.

Ground Handling

Danger Zone

By Lee Benson

Avoiding Career Landmines

In my last article ("*Tips for Younger Pilots*," July 2011 *Rotor & Wing*, page 52), I expressed some thoughts for folks contemplating a career as a helicopter pilot. I've received a lot of good feedback on this article and would like to expand a bit and focus on things to think about from a career standpoint.

First of all, I would like to say that I've never worked for a bad helicopter company. I define a bad company as one that thought more about their bottom line than my bottom. Yes, I've worked for companies that didn't pay as well as I wished they would have, but I never felt that my safety was compromised. This happened in my career because it was my first goal to work for companies with a good safety record. I had opportunities to work for more money on occasion, but stayed true to my first goal. I am alive today, so I guess it worked.

I'm not gifted with the ability to make anyone my friend, that was my dad; I am not the funniest person in the industry either—that would be Stu Taft. This is a very small industry. Not everyone you'll work with will be a good match, but try to stay cordial, be professional, keep the rumors and back stabbing to a minimum.

I guarantee you that any enemies you make in this business will be in a position to hire, help or hinder you down the road. If you have kept the interaction civil and professional, the least you can expect is that if your name comes up, this person's input will be at least neutral.

Maybe this is more true in the past than now, but helicopter work is seasonal. Don't be the pilot that lets the company carry him through the slow time and then when work picks up, take a different job for another bit of money per month.

Loyalty is a two-way street, if it is shown it should be returned. Then there is the operator that let his senior seven pilots from a staff of 27 pilots go on the same day, because if he employed them any longer he would be required to contribute toward a retirement plan. I was one of the seven that was let go.

My point is, if I'd been in the group of 20 less-senior pilots that this company retained, I would have had my radar up for a new position regardless of the time or circumstance.

It's important to realize as a young pilot—let me restate that—realize as a pilot in this industry you will never know everything. As a young pilot in particular it's important that you have mentors that you feel comfortable with. A chief pilot should always see this as one of his responsibilities, not that he has to be the mentor himself, he may not have the time, but he should ensure that the less-experienced pilots on staff have a person to go to.

When I came back from Vietnam and entered the commercial market, the average age of helicopter pilots was probably 24. There were some older pilots around at that time and several of them extended their hand to me as a mentor, for that I thank them from the bottom of my heart.

Today all of us Vietnam-era pilots are at the end of our careers, the pilots that helped us many years ago are watching how we treat this younger generation. Let's not disappoint them. For older pilots, if you are fortunate enough to train in simulators use them for everything they are worth. Care about your performance in the simulator. Keep an open mind towards changes in your flying habits that the instructors suggest.

Remember that you'll be as good a hand skills pilot as you will ever be by the time you have 3,000 or 4,000 hours. It's your ability to remain focused and committed to your flying mentally that separates the good pilots from the excellent.

My last thought on this is I think that a company atmosphere that encourages the pilots to share ideas, problems and solutions is the first step toward the safety culture that IHST (the International Helicopter Safety Team) has identified as the answer to reducing accidents in the helicopter industry.

I always use my former employer, Los Angeles County Fire, as an example because that's what I know best. When I left, every pilot had more than 10,000 hours, egos—what would ever make you think that?

But here's my point—not all of the pilots got along with every other pilot, but all of the pilots had at least three or four guys that they could relate to and feel comfortable with. Many years back, one pilot that we had recently hired isolated himself as the only keeper of the flame. He was fired.

Public Service

By Ernie Stephens

Overdoing the Overtime

About 10 years ago, I ended up as the acting lieutenant in charge of the helicopter unit where I worked. It really wasn't that big a deal. With the guys and the lady I had surrounding me, things were actually pretty sweet.

Our biggest problem at the time was not having enough pilots to cover all our shifts. They were all hard-charging helicopter drivers and tactical flight officers, but they had lives outside of the department. Most had young children involved in school activities, sports and all kinds of things. So, from time to time, they wanted to take off from work to see their daughter play a frog in the school play, see their son pitch an "almost no-hitter," and clean up after the pony that was rented for a birthday party. I, having no kids (and no life), happily covered pretty much all of those shifts, usually without putting in for overtime pay. (The latter was to keep them off my back about how much money we went through.)

One day, I was on the phone with Betty, my captain. As the assistant commander of the Special Operations division, she was in charge of aviation, canine, and a few other units. That meant she was often too busy to make the 15-mile trip to the hangar very often, but she still managed to check on us by phone regularly. The day of that call, I mentioned working a couple of extra shifts during the previous week to ensure an aircraft was available while someone else was off for a family event. She commended me for working the extra days, and that was about it – until a couple of days later.

Apparently after giving what I said about the hours I was working some thought, Betty phoned me back and said, "From now on, I don't want you working any overtime without asking me first." I have to tell you, I was pretty offended. Generally speaking, senior sergeants don't have to get permission to work overtime when there won't be any money involved. Heck, I wasn't even looking for "comp time," which is additional time off later on down the road. And I was just about to tell her how offended I was, albeit respectfully, when she explained the reason for her order.

"Ernie, I know you," she said. (And she was right, considering we had known each since we were slick-sleeves.) "You'll work until you fall flat on your face unless someone stops you. I need to make sure that you aren't flying when you're tired."

Yeah, that was pretty thoughtful.

It isn't that I didn't appreciate the oversight coming from my combination commander and friend, but I was still a bit insulted, until it occurred to me that—in all honesty—I'm probably not as good a judge as I'd like to think I am when I'm tired.

My captain had a point. I can get so gung-ho about working the overtime shift at hand, that I'll inadvertently set myself up to get burned out days later when my normal shift comes up. I immediately switched from being defensive, to being thankful for the insight.

This story came back to me while attending the ALEA conference in New Orleans in July. A few of my pals from agencies around the country said that with all of the budget problems their departments are experiencing, one of them is a manpower shortage. Yes, there has always been a problem finding pilots, paramedics and even tactical flight officers, but now it isn't just a matter of not being able to find qualified personnel. It's also about not being able to hire them because of thin budgets.

Many aviation units are losing personnel due to the usual stuff, like retirements, resignations, promotions, etc., but spending restraints are preventing them from filling those vacancies. The next step is either to cut back on the unit's availability, or have crews work overtime to cover the gaps. Add that to the number of people who need to generate some extra income, the folks who feel an obligation to keep an aircraft available, and an increasing number of administrators who believe in "mandatory overtime," and you now have a witch's brew for inadvertently working too long and too hard.

If you're in your hangar right now, take a look in the trashcans. How many empty cans of power drinks and drained bottles of energy shots do you see in there? Are people stashing sleeping bags in their lockers these days? I'm not calling it a scientific calculation, but I am wondering if these lean times are pushing crews beyond a nice, safe workload. And let's face it, people with badges are not always willing to say they're reaching a breaking point, let alone gone beyond it. We may even miss it in ourselves entirely.

This business of doing more with less more is a necessity in today's economic environment. And people who have spent their lives in public service won't let that keep them from doing their jobs. But, watching ourselves and watching each other to make sure we don't overdo it with the overtime is an idea that has found its time moreso than ever. Thanks, Betty!

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Military Insider

By Andrew Drweiga

An Inevitable Casualty of War

Military commanders, not to mention their political masters, dread any operational loss that results in a high number of military personnel being killed and/or injured, especially in a single incident. Such an event can turn a nation's public commitment to the ongoing war and thus erode the will of the politicians to prosecute it further.

The loss of the U.S. National Guard Chinook CH-47D (not a special forces MH-47G of the 160th Special Operations Aviation Regiment as first anticipated) with 38 personnel onboard was the biggest single loss of life to U.S. and International Security Assistance Forces (ISAF) since U.S. troops first began fighting in Afghanistan in 2001. The Chinook was shot down after receiving ground fire and a suspected fatal hit from a ground launched rocket propelled grenade (RPG), according to a U.S. Department of Defense (DoD) statement. As the government's stated intent is to 'draw down' U.S. forces in Afghanistan with the aim of withdrawing the majority of troops by 2015, this incident has had less of an impact on public opinion than it might otherwise have done. Although shocked, the public has been hardened by years of accepting losses from Iraq at first and then Afghanistan.

But what was especially significant of the tragedy was that 22 of those onboard were U.S. Navy SEALs from the Naval Special Warfare Group, the same formation that had so recently participated in the successful raid to 'take out' Osama bin Laden in Pakistan. Government sources said that none of the personnel who died onboard the Chinook actually took part in the earlier raid, but the deaths of so many highly trained, elite professionals can have a lasting effect far beyond what the numbers alone would suggest.

Elite soldiers such as the Navy SEALs, the Combat Applications Group (Delta Force), the UK's Special Air Service (SAS) and Special Boat Squadron (SBS), among others, not only have exceptional fighting skills but they also have an invaluable 'collective memory' of expertise earned through a variety of campaigns and conflicts worldwide. Once lost, these cannot be replaced except for the slow build-up of experience with new members gained over time.

It is strange how warfare and fate seem to intertwine, often at the same moment. On a slightly smaller scale, but with the same effect, the British experienced tragedy and success with their special forces during the Falklands war in 1982. While using a technique called cross-decking, where a helicopter is loaded with stores or troops and transferred from one ship to another while at sea, during the night of May 18, 1982, an S-61 Sea King of No. 846 Naval Air Squadron with 30 people onboard crashed into the icy sea while cross-decking. It has been stated that a bird-strike caused the accident, but only nine of the 30 people onboard managed to struggle clear of the rapidly sinking helicopter.

Of the 21 who died, 18 were members of the British Special Air Service (SAS) from D and G Squadrons. Again, this terrible loss came only days after a successful raid on an airfield situated on Pebble Island, part of West Falkland. During the night of May 14/15, a force of 48 SAS troopers and one gunfire support expert had attacked a newly activated airfield. As a result of the raid, during which no troops were lost, a total of 11 Argentine aircraft were destroyed: six Pucaras, four Turbo Mentors and the Short Skyvan, as well as a radar installation, and fuel and ammunition dumps. This was vitally important, as the slow-moving ground attack aircraft could have caused havoc during the British landings to retake the Falklands that occurred shortly after. Unfortunately a number of those who died on the Sea King had been part of the Pebble Island raiding party only days before. Due to the small size in terms of numbers of the SAS, this accident led to an urgent need to quickly replace the numbers of men lost. Many replacements were recruited

Continued on page 54

advertiser index

Military Insider

Continued from page 52

from the Parachute Regiment, itself an elite fighting unit but without the high level of individuality found in special force soldiers.

Looking at this incident's effect on the public and their continued support for the Falkland's campaign, there was still a large groundswell of public opinion behind the government to recover what was widely perceived at the time as British territory, so although a serious loss, it did not perceivably damage the continuation of the fight.

In our modern culture, we have been accustomed to the need to attach blame to large incidents and to ultimately find someone responsible. There are some cases where this process needs to be carried out, as in the case of RAF Nimrod MR2 reconnaissance aircraft No XV230 which, while on a standard reconnaissance mission over Afghanistan in September 2006, suffered what the official report called a catastrophic mid-air fire which quickly led to the crash of the aircraft, killing all 12 of the crewmen onboard. The difference here is that the aircraft was on a regular operational sortie; it had not been attacked but yet had crashed with a heavy loss of life. A Board of Inquiry was established which, when published in December 2007, had concluded there was a substantial shortcomings surrounding the safe operational regime laid down for this type of aircraft. As one of the direct results of the subsequent Haddon-Cave review into the inquiry, the Ministry of Defence established a new Military Aviation Authority with direct responsibility for issues such as the airworthiness of every aircraft in the MoD's inventory.

But the loss of the CH-47 Chinook with the invaluable number of SEALs onboard seems to have been an operational casualty of war. It appears that none of the usual questions that surround such an incident can be legitimately asked. Was it necessary to have so many SEALs onboard one aircraft? Yes, if the time and situation demanded a quick response and that was the best option available at the time. Could more aircraft have been used? Perhaps, but then more aircraft would complicate the mission and call for extra planning, cutting down the reaction time. And were more aircraft available at the specific time they were needed? Why weren't special force operatives being flown by special forces helicopter crews, such as those belonging to the 160th Special Operations Aviation Regiment? Well, as U.S. Army commanders have repeated over the last few years, over 50 percent of regular U.S. Army operations in Afghanistan are conducted in part or in whole to support special force operations. A sharing of resources would be standard practice on the battlefield, apart from pre-planned deliberate special force operations where it would be more usual for a specialist team to be put together.

Sadly then, it very much appears that the loss of the SEALs, aircrew, Afghan National Army soldiers and others in Tangi Valley, Wardak Province, was the result of a fortunate hit by a rocket propelled grenade fired by a Taliban insurgent. While ISAF have since revealed that coalition forces later tracked down and killed the leader of the Taliban group (Mullah Mohibullah), and the shooter, that was the focus of the action, it underlines the fact that the threat is everywhere during an asymmetric battle. Although Brig. Gen. Jeffrey Colt—the deputy commanding general of the 101st Airborne Division and an experienced pilot who also served with the 160th SOAR—is conducting an investigation, it is doubtful whether he will find anything other than an incident resulting from warfare.

Ground fire remains the single biggest threat to helicopters operating close to the ground, especially in the moments during landing and take-off when they are low and slow. Apache attack helicopters often escort troop carrying aircraft but they can't be everywhere, all of the time given the frequency of CH-47 flights—the troop carrying workhorse of this conflict—in any given day during the war.

Members of the U.S. Army National Guard and Afghan National Army carry wounded personnel to a Boeing CH-47 Chinook near Afghanistan's Helmand Province in this December 2008 file photo.

Photo by Charles Eckert

Dallas Daily

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