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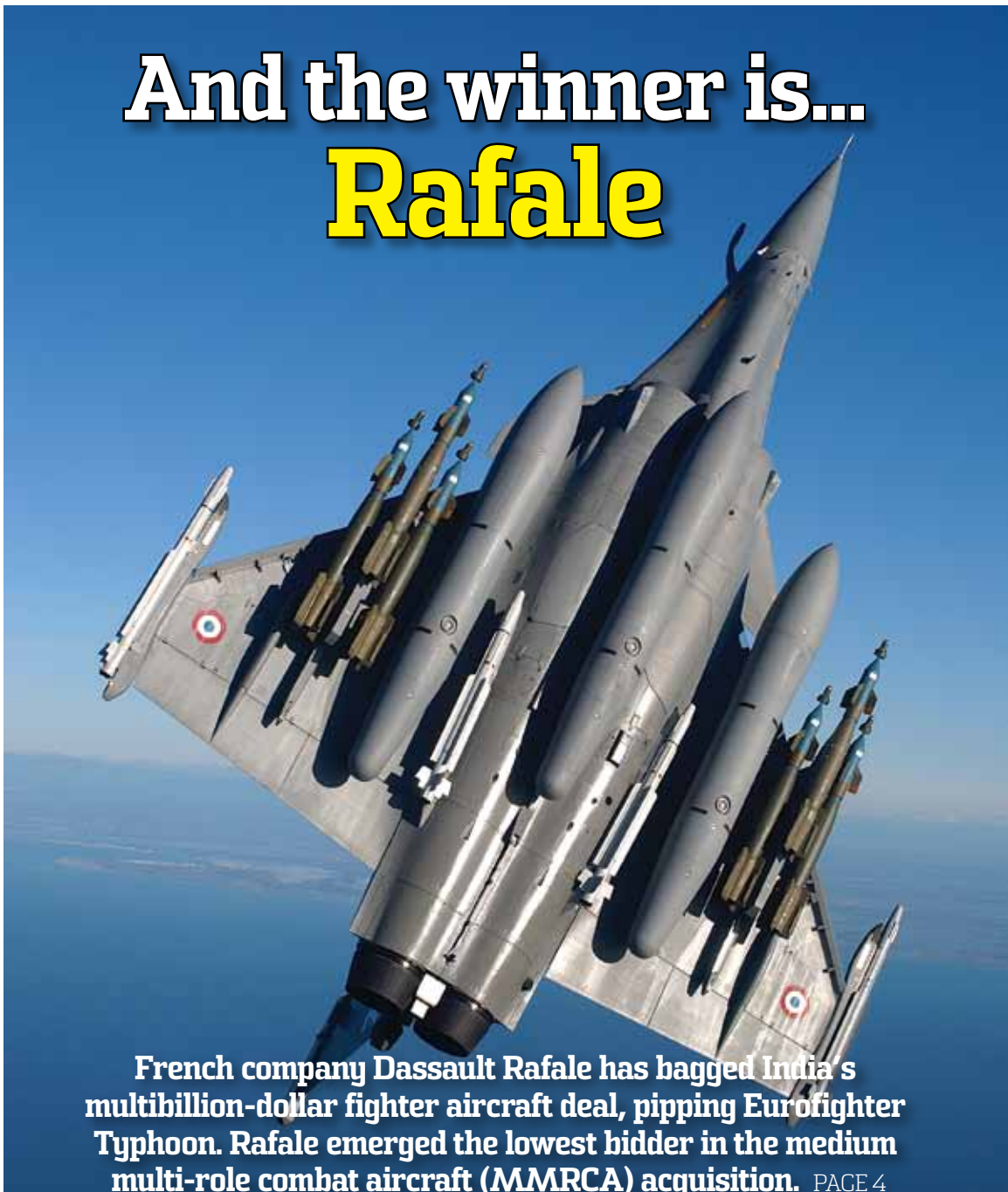
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And the winner is... **Rafale**



French company Dassault Rafale has bagged India's multibillion-dollar fighter aircraft deal, pipping Eurofighter Typhoon. Rafale emerged the lowest bidder in the medium multi-role combat aircraft (MMRCA) acquisition. PAGE 4

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Boeing selects firms for Chinook in-service support programme

Boeing has selected three Canadian firms to receive the first group of work packages for in-service support of 15 Boeing CH-47F Chinook helicopters, designated CH-147F for the Canadian Forces. Following an open competition, Boeing chose the following suppliers: L-3 Communications MAS (Mirabel, Quebec): technical publications; Raytheon Canada Limited (Calgary, Alberta): supply chain support; L-3 Electronic Systems (Enfield, Nova Scotia): logistics support analysis.

“Boeing is working with companies across Canada to ensure the right infrastructure is in place to support the Canadian Forces’ CH-147F fleet,” said Jim O’Neill, Vice President and General Manager, Boeing Integrated Logistics. “We will support the operational readiness of these Chinooks while managing overall life-cycle cost and providing long-term opportunities for the Canadian aerospace industry and workforce.”



Through Canada’s Industrial and Regional Benefits (IRB) Policy, Boeing’s IRB commitments on the Medium-to-Heavy Lift Helicopter In-Service Support Programme will bring benefits of approximately \$2 billion to Canada over a 20-year period.

In August 2009, the Government of Canada announced it would acquire 15 CH-47F Chinooks to address the Canadian Forces medium-to-heavy lift helicopter requirement. Production of the fleet is under way at Boeing’s facility at Ridley Township, Pennsylvania. Delivery of CH-147Fs to the main operating base at Petawawa, Ontario, will begin in 2013.

The Canadian CH-147F Chinook is an advanced multi-mission helicopter that features a modernised airframe with a long-range fuel system, fully integrated digital cockpit management system, common avionics architecture system cockpit, self-protection system, improved electrical systems and advanced cargo-handling capabilities. Life-cycle support of these aircraft will be delivered through a long-term Performance Based Logistics (PBL) programme that will provide full system logistics and training services. **SP**



Cover:

French company Dassault Rafale has bagged India’s multibillion-dollar fighter aircraft deal, pipping Eurofighter Typhoon. Rafale emerged the lowest bidder in the medium multi-role combat aircraft (MMRCA) acquisition.

Cover image: Dassault Aviation

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And the winner is..... Rafale

After a long-drawn and hotly contested race, Dassault's Rafale has won the almost \$18 billion medium multi-role combat aircraft (MMRCA) programme to supply 126 fighters to the Indian Air Force (IAF). The French fighter aircraft pipped Eurofighter Typhoon in an all-European final, after Boeing, Lockheed Martin, Saab, MIG were down-selected last year.

It is indeed heartening news as the IAF has been waiting for quite some time to hear about the aircraft it would be flying, keeping pace with its massive modernisation plans.

Rafale has been a strong contender and its recent campaigns in Libya have been written about. Rafale has been the lowest bidder and under the project, the first 18 jets will come in "fly-away condition" from France from mid-2015 onwards, while the rest 108 fighters will later be manufactured in India over six years after a transfer of technology (ToT) to the Hindustan Aeronautics (HAL).

The acquisition process augurs well for the nation which is not only modernising its armed forces but securing the nation. The Prime Minister, Dr Manmohan Singh, had rightly said "Democracy can often be frustrating, but it is also the greatest guarantor of internal security." There cannot be a more truer statement, albeit there have been internal disturbances, spawned from across the border or due to non-development in certain areas.

India's strength is its democracy. Look at what is happening in neighbouring Pakistan which has been living mostly in military rule from the time it got separated from India. Military coups in Pakistan began in 1958 and the Islamic state has been under military rule from 1958-71; 1977-88; and 1999-2008. Now again the spectre of a coup is looming large, though the Pakistan Prime Minister Yousuf Raza Gilani has said that there was "no chance" of a military coup in Pakistan ever as all stakeholders including the army, desires democracy and stability in the country. But a country where the military is dominant such statements don't hold water.

In the coming years, Pakistan's economy and internal security will be tested more than ever. The problem with the political leadership has been that they live in constant fear of getting

overthrown, hence there is weak governance. Compounding the problem is the spread of extremism within and outside of Pakistan. Another important point leading to the country's instability are the deteriorating ties with the US, heightened after Osama bin Laden was found in Islamabad's backyard.

Lt General P.C. Katoch has hit the nail on the head in his fortnightly column mentioning how the return of Machiavellian Musharraf to Pakistan cannot be good for India as it only bodes more evil. General Pervez Musharraf, Kayani are all of the same ilk - and those in India who still consider him as 'the best bet for India' need fresh thinking caps.

We wrap up the issue with some good news that the New York Police Department has taken up a research project to detect concealed guns carried by individuals from as far as 82 feet away. If the project materialises, it will be a boon to the law and order agencies.

Happy reading!

Jayant Baranwal
Publisher and Editor-in-Chief

[By SP's Special Correspondent]

French Rafale wins the MMRCA race



Fifty-four months after the Indian Government floated what was without a doubt its largest, most ambitious acquisition effort for combat aircraft ever, it chose the French Rafale to meet its monumental medium multi-role combat aircraft (MMRCA) requirement. For Dassault Aviation, the French company that builds the jet, the selection is, quite literally, the kiss of life. To open its export account, albeit belatedly, with the Indian deal is of enormous prestige value to an aircraft that has had the aerospace industry baffled for years over its lack of commercial success. With the Indian Air Force's (IAF's) stamp of approval, and the billions of dollars that will now re-energise Dassault as a manufacturer of combat aircraft, the Rafale programme gets to shake off years of tough luck, international intrigue and criticism that it was a programme cursed never to succeed. For Dassault, winning a deal with one of the world's most discerning air forces—and a process that is more demanding than most—makes up for the steady stream of disappointments that preceded the victory.

Six years ago, well before the Indian Government had for-

mally floated the MMRCA tender, Dassault abruptly withdrew the Mirage 2000-V from the sweepstakes, and putting forth a package based on the much newer Rafale jet. At the time, the move was controversial, but was seen as Dassault's exasperation with India's decision not to simply buy more Mirages outright, as well as a recognition that the procurement process had expanded to include more capable aircraft like the Boeing F/A-18 Super Hornet. As it turned out, the decision was a good one, because while the IAF sulked at its original choice pulling out of the reckoning, the French Government persuaded New Delhi to look at an aircraft that was very much part of the same legacy and heritage. The Rafale, therefore, was in and comfortably so.

In April 2009, roughly two years after the MMRCA procurement process had begun, reports emerged that the Rafale had been dropped from the list of contenders because its technical bid did not make the Indian cut. While the report was denied by the Ministry of Defence (MoD), it provided the first real scare to a campaign that had become confident that it was the Indian Gov-

[By SP's Special Correspondent]

ernment's default choice. Over the months, Indian test teams flew Rafale in India and France, testing the aircraft and assessing its combat capabilities. In February 2011, correctly sensing that a milestone in the procurement was close, Dassault for the first time publicly displayed Rafale at the Aero India 2011 show at Yelahanka, near Bangalore. Apart from a memorable flight display, the aircraft flew dignitaries like Member of Parliament Navin Jindal. It was the first time the obsessively low-profile French firm was stepping out into the light, showing its aircraft off and reaching out to the public in any real sense. As it turned out, the aircraft received huge attention. Importantly, it was still considered to be an underdog in the competition, and one that had most odds stacked against it.

Two months later, just a day before the six companies' commercial bids were to expire, Dassault and EADS Cassidian were picked out and instructed to extend the validity of their bids, signalling a shock elimination of the other four contenders—the Lockheed Martin F-16IN Super Viper, Boeing F/A-18 Super Hornet, Saab Gripen IN and UAC MiG-35. The down select created massive upheaval in the aerospace market, turning several notions on their heads. For starters, the IAF had asked the government to choose between two of the most modern, but also most expensive aircraft in the competition. In several other aspects, it was an unexpected decision: the aircraft were heavy twin-engine fighters, not quite medium to light airplanes that the IAF had originally set out to procure to augment its Mirage fleet. Something was amiss, but it was put down to an expanded requirement and the parallel recognition that buying newer aircraft made better sense in the long-term, an idea that the MoD supported in full.

In November 2011, the Indian Government opened the sealed commercial bids of the two finalist contenders and began

an elaborate process of divining a common lexicon to judge which of the two aircraft was L1, the lowest bidder, in other words the most economical package judged from a veritable matrix of criteria including unit cost, cost of spares and support, maintenance costs, technology transfer costs, etc. Reports at the time suggested that it was a wafer of a margin that separated the Eurofighter and the Rafale, throwing up the possibility of extended deliberations. The MoD's benchmarking and selection process is still classified, and is likely to be revealed in the weeks and months ahead, but it is likely to have been one of the most complex ever adopted. By all accounts, it took a herculean effort to arrive at a clear lowest bidder, but that is what the committee ultimately achieved through what sources say was a thoroughly empirical process that followed procedures to the last clause and left nothing to subjectivity.

For Dassault, India's selection of the Rafale is sweet vindication of sorts. The company had always felt slighted by India's decision to go for a global tender, when the IAF had expressly said it wanted more Mirage 2000 fighter jets. That sense of entitlement was progressively eroded by the high-voltage campaigns that the Rafale's rivals pitched in India, outshining, outclassing and outshouting the French aircraft on every platform. Indeed, India hadn't even seen the Rafale in the flesh until a year before it emerged victorious. Some saw this as Dassault diffidence, others as thorough professionalism in what is after all a serious procurement of a weapon platform and not a carnival. Dassault's win is ironic in many ways, and even the company will acknowledge that this victory couldn't have come a moment sooner. After a string of disappointments, most recently in the form of a scare in the UAE, Rafale had acquired the reputation of being the beautiful jet that nobody wanted to buy. The Indian deal kills many ghosts. **SP**

Tejas LSP-7 to fly 'any day now'

The significantly delayed seventh limited series production unit of the light combat aircraft Tejas (LSP-7) is expected to make its first flight "any day now" according to members of the programme team. In what is turning out to be a slow phase for the comprehensive trial programme, no new Tejas unit has flown since the LSP-5 flew in November 2010 (the LSP-6 is a special platform specifically to expand LCA's flight envelope, including angle of attack and G-limits). The LSP-7 and 8 are to be handed over the air force for user flight trials leading up to full squadron induction and service.

Sources familiar with the developments said the fresh delays have been necessary owing to stringent attention being paid to manufacturing, logistics and maintenance procedures on the next two LSPs, intended to be replicated in series production aircraft. New problems, starting around the time initial operational clearance-1 (IOC-1) was awarded, have created serious hurdles in the programme. In fact, a whole year after IOC-1 was awarded, the programme has made no substan-



tial progress. As things stand, final operational clearance has already slipped by over a year to December 2014. The new testing issues and performance parameter challenges are delaying flight testing schedules, expansion of the platform's operational envelope and certification. **SP**

[By SP's Special Correspondent]

Vikramaditya sea trials begin in May

The Indian Navy's Vikramaditya aircraft carrier (erstwhile Admiral Gorshkov) is finally ready to sail out for accelerated sea trials in May this year, though delivery schedules have slipped once again to the displeasure of the customer. The trials will be conducted with a great degree of anticipation considering that the vessel, originally called Baku hasn't been out to sea in roughly 20 years since it was decommissioned from Russian service.

While the Navy was keen to take control of the warship before Navy Day in December this year, sources reveal that February 2013 is the rough new time frame when Vikramaditya will be in Indian hands - more than nine years after Russia agreed to transfer the ship to India following a refit and refurbishment. When Navy Chief Admiral Nirmal Verma visited the Sevsmash shipyard in July last year, he had personally asked Shipyard Director Andrey Dyachkov to hand over the ship before the winter months, but the team conducting mooring trials has already slipped timescales.

The Navy's controller of warship production Vice Admiral N.N. Kumar had raised the issue once again in September last



year. Through 2011, the Sevsmash trial team has tested power systems, major systems, wiring, electronic equipment, hydraulics and other major systems on board the vessel. It is only after both the Sevsmash team and the Indian Navy group stationed in Severodvinsk are satisfied that docked trials are completed satisfactorily that the ship will be cleared for sea trials. As of now, this has not been achieved yet. **SP**

INS Chakra joins Indian Navy

India's tryst with nuclear submarining continues with the K-152 Nerpa being handed over to an Indian Navy crew on January 23 for a 10-year lease. The submarine was handed over before India's Republic Day as desired by the navy. The Akula-II class nuclear attack submarine will be the most advanced submarine India has ever operated, leagues ahead of the Charlia-1 class namesake that India took on lease from the Soviet Union from 1988-92.

While the Chakra is not armed with anti-ship or land attack missiles, it will be armed with torpedoes and therefore will function in the sea denial, patrol and intelligence gathering roles crucial to the Indian Navy's responsibilities. While the original INS Chakra experience turned out to be mixed, since the Indian Navy didn't manage to manipulate the experience to full effect, lessons learned will be applied to the new Chakra. Apart from its operational duties, the SSN will also be a training platform for generations of submariners in extended submerged operations.

Operating the Chakra will give the Indian Navy's dolphins valuable experience ahead of the commissioning of the indigenous nuclear-powered ballistic missile submarines of the Arihant class. It is not clear at this stage if the DRDO and Naval Design Bureau plan to design and build nuclear attack submarines as well, though an internal 2009 report strongly recommended that the military-industrial complex consider developing SSNs from the know-how accrued in the advanced technology vessel (ATV or Arihant) programme. The INS Chakra is based in Visakhapatnam, with a secondary base at Mumbai and subsequently at INS Kadamba in Karwar. **SP**

DRDO tests mini drones

The DRDO has conducted fresh tests of a slew of mini drones being prepared for the armed forces and paramilitary as part of the National Programme on Micro Air Vehicles (NP-MICAV). The Black Kite, Pushpak and Golden Hawk micro air vehicles (MAV) were tested outside Bangalore this fortnight as part of a focused effort to build advanced MAVs. Integrated with thermal, daylight or night vision optics, the MAVs are being built to be capable of autonomous flight at an altitude of at least one km providing a realtime downlink of video, still imagery and other data if required. The three MAVs were demonstrated to the Integrated Defense Services (IDS) in May 2010, after which the Golden Hawk and Black Kite were selected for user trials. Black Kite units with wingspans of 300mm and 430mm have already been test flown in remote-controlled and autonomous modes, showcasing its capability to fly autonomously and demonstrate loitering capabilities, crucial for surveillance. The big challenge now is to perfect a flight control system that makes possible fully autonomous flight in a cluttered urban environment. **SP**



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India is the cornerstone of our defence business: Rolls-Royce

[By Sucheta Das Mohapatra]

India is the cornerstone of Rolls-Royce global defence business," said Nick Durham, President, Customer Business, UK and International Defence, Rolls-Royce, addressing a press conference in New Delhi recently. Adding that the company is now looking at how it would provide its customers more value for money.

Durham highlighted India's role in the globalisation of the Rolls-Royce defence business, and spoke about the benefits of partnered support in the context of Rolls-Royce services strategy. He spoke at length about the company's availability contracting for UK Ministry of Defence and how the company managed to help the government save costs by 50 per cent through its 'Rocet' and 'PSOP' maintenance support programmes for the RAF's Tornado and Eurofighter fleets, respectively. Durham spoke about Rolls-Royce support to UK's tanker aircraft programme as well, which is more than 60-year-old now and how greatly the entire effort was appreciated by the UK MoD/RAF, especially on the successful conclusion of the Libyan air campaign. "The company is now looking at setting up service delivery centres to help our defence customers," he said.

Though the officials chose not to comment on the Indian Air Force (IAF) medium multi-role combat aircraft (MMRCA) deal, they spoke highly about the EJ200 in the Eurofighter Typhoon with the Royal Air Force (RAF). The company officials said that it has proven itself in the Libyan war, which, initially planned for 30 days actually lasted for eight months with tremendous increase in the flying effort. "The EJ200 met the high operational demands and surpassed 6,000 engine flying hours achieved over extended operational deployment with individual sorties lasting up to seven hours or more, without a single case of engine withdrawal".

Replying to a question put by Jayant Baranwal, Editor-in-Chief, *SP's M.A.I.*, whether Rolls-Royce will help India, if it goes to war, Durham said, "It is always our intent to find a way to support our customers."

On the offset clause, the officials said that they have no issues with it. "Rolls-Royce has great personal relationship with India since the last eight decades, an easy relationship, con-

stantly evolving. The Defence Procurement Procedure today is not what it was earlier, it's changed," said John Gay, Director for Customer Business, South Asia, Rolls-Royce. Besides it's more than 55-year-old partnership with the Hindustan Aeronautics Limited (HAL), the company utilises engineering service centres in Bangalore launched with Quest in 2005 and Tata Consultancy Services (TCS) in 2010, and has a MoU with Larsen & Toubro, signed in 2010 to address civil nuclear opportunities globally. The service centres with TCS and Quest have more than 700 engineers, being provided expertise and skill development opportunities by Rolls-Royce.

On being asked to elaborate on the future collaborations with the IAF, the officials said, "We are discussing with them, explaining what we know and what we have. Nothing specific has been proposed." Likewise, to a query raised by Jayant Baranwal as to what would the company prefer, the foreign military sales (FMS) or direct commercial sales (DCS) route, Durham said, "That's not our business. It is the commercial arrangement that we have with the defence companies based on our capability and relationship."

The officials also spoke about the MissionCare agreements in place with the IAF for the AE2100 and AE3007 engines installed on its C-130J and Embraer Legacy aircraft, respectively. He said that the company's service solutions are now extending beyond propulsion system into engine capability provision and platform management. Speaking about the milestones achieved by the company in 2011, the officials spoke about their involvement in Eurofighter Typhoon, C-130J, C-127J, Global Hawks, etc. On the Indo-Rolls Royce cooperation

front, the latest milestone achievement was the groundbreaking ceremony last month in December 2011 for the construction of a new manufacturing facility in Bangalore to produce components for the Rolls-Royce Trent family of civil aero engines. The state-of-the-art facility is owned by the International Aerospace Manufacturing Private Limited (IAMPL), a joint venture between Rolls-Royce and HAL formed in 2010. Scheduled to start production in 2012-13, IAMPL will incorporate the latest Rolls-Royce manufacturing techniques and will be developed as a 'Centre of Excellence' with worldwide use of its products. **SP**





Lakshya-II pilotless target aircraft proves IT mettle

Flying at sea skimming height of about 15 metres at DRDO's test range near Balasore, Lakshya-II, the advanced version of DRDO's pilotless target aircraft (PTA), demonstrated its full capability on January 25. In a flight lasting over 30 minutes, it was made to dive down from an altitude of around 800 metres to just 12 m and maintained required altitude for the specified time before demonstrating auto climb-out.

The entire flight was pre-programmed and was totally successful. It demonstrated various technologies and sub-systems including software correction to auto rudder scheme done to prevent loss of mission, engaging and flying in way point navigation mode while carrying two tow targets. During the flight one of the tow targets was released and the other was deployed while way point navigation was on.

This was the 10th flight of Lakshya-II PTA and this was the first time that the ultimate capability of the Lakshya-II was demonstrated achieving all the user's objectives. Lakshya-II has been designed and developed by the Bangalore-based Aero-



nautical Development Establishment, a premier DRDO lab specialising in UAVs and flight control systems. **SP**



US Army contract to Oshkosh Defense for heavy vehicle fleet

The US Army has awarded Oshkosh Defense, a division of Oshkosh Corporation, a bridge contract to continue production and support of the family of heavy tactical vehicles (FHTV). Under this extended contract, the government can place orders through October 2013 and Oshkosh Defense can deliver through September 2014.

The Oshkosh FHTV includes the heavy expanded mobility tactical truck (HEMTT), heavy equipment transporter (HET) and palletised load system (PLS). Army and National Guard soldiers have relied on these vehicles in Iraq and Afghanistan, and in other missions around the world, to safely haul heavy payloads in challenging terrain and extreme conditions. **SP**

PHOTOGRAPHS: DRDO, Oshkosh Defense

CAE awarded military contracts over C\$100 million

CAE has been awarded a series of military contracts valued at more than C\$100 million. They include contracts from Canada's Department of National Defence to perform major upgrades to CC-130H and CH-146 simulators, a contract from Professional Way in Malaysia to provide long-term support services for an AW139 full-flight simulator, a contract to develop two Tornado maintenance trainers for the German Air Force and Royal Air Force, and two contracts from undisclosed customers to provide a CAE 3000 Series helicopter simulator and related training services.

"CAE's global presence, our comprehensive portfolio of both simulation products and services, and a significant installed base continues to give us a solid pipeline of opportunities," said Martin Gagne, CAE's Group President, Military Products, Training and Services. **SP**

Navistar Defense wins MaxxPro award

Navistar Defense has announced that it will provide 650 independent suspension kits to the US Marine Corps' for its International MaxxPro Plus mine resistant ambush protected (MRAP) vehicles. The contract, worth \$110 million, was placed by the US Marine Corps System Command order, and will enhance the mobility and survivability of earlier MaxxPro vehicles with the addition of the DXM independent suspension kits.

Fielded in 2008, MaxxPro Plus units have been deployed in Iraq and Afghanistan and have performed admirably in austere conditions. The current upgrades will increase the capability of this proven platform.



Installation of these kits will be performed at the MRAP Sustainment Facility in Kuwait. Work will begin in August 2012 and is expected to be completed by the end of October 2012. **SP**

France launches development of Milan replacement

The French Defence Ministry's defence procurement agency, Direction Générale de l'Armement (DGA) has awarded a contract to MBDA for the risk reduction phase of the Missile Moyenne Portée (medium-range missile, or MMP) with which it intends to replace the Milan wire-guided anti-tank missile that has been in service since 1974. Launch of the programme is tentatively scheduled for late 2012.

The Milan missile is a major export success and the MMP programme will allow French and European industry to continue offering its customers a complete family of high-performance missile systems. **SP**

Missile Defence National Team awarded C2BMC contract

Lockheed Martin, as prime contractor leading a consortium of five major defence contractors, has been awarded a follow-on contract with an estimated value of \$980 million to continue work on the command, control, battle management and communications programme for the Missile Defense Agency. The contractors, known as the Missile Defense National Team, will continue development, operations and sustainment work.

The C2BMC programme is the "integrating element" for the Ballistic Missile Defense System and links the various sensors and weapon systems. The system is the force multiplier providing capabilities to integrate and globally synchronise missile defence systems and operations, providing an optimised, layered defence against all ranges of threats and in all phases of flight. The majority of the work is conducted in Arlington, Virginia; Huntsville, Alabama, and Colorado Springs, Colorado. **SP**

BAE wins \$313 million contract for Paladin Program

BAE Systems received a \$313 million contract modification for additional engineering design, logistics development and test evaluation support to complete the Engineering and Manufacturing Development phase of the US Army's Paladin Integrated Management (PIM) Program. PIM is the latest howitzer in the M109 family of vehicles.

"The PIM Program will ensure that the self-propelled howitzer fleet is sustainable in the long term and provides significant growth potential for our customer," said Joe McCarthy, Vice President and General Manager of Combat Vehicles at BAE Systems. "Since we built and delivered the seven PIM prototype vehicles last year, we have completed all contractor tests, as well as Phase One of the Army's Developmental Test. The additional funding that we are receiving through this contract will allow us to support the remainder of the Army's rigorous test programme and

complete the production planning efforts in support of the low-rate initial production decision."

BAE Systems was awarded a \$63.9 million research and development contract in August 2009 to produce five self-propelled Howitzers and two carrier, ammunition, tracked vehicles. The seven prototypes were delivered to the US Army, on schedule, in May 2011.

Work under this contract will be performed at various BAE Systems facilities, including: York Pennsylvania; Johnson City, New York; Minneapolis, Minnesota; Santa Clara, California and Sterling Heights, Michigan. The contract was awarded by US Army TACOM and is expected to begin in February 2012 with anticipated completion in January 2015.

The Paladin Integrated Management howitzer uses the existing main armament and cab structure of a Paladin M109A6 and replaces unique vehicle chassis components with modern components common to the Bradley family of vehicles incorporated in an improved and more survivable chassis structure. PIM incorporates a state-of-the-art "digital backbone" and power generation capability and integrates electric elevation and traverse drives, electric rammer and digital fire control system. The upgrade of the PIM ensures commonality with existing systems in the Heavy Brigade Combat Team, and reduces its logistical footprint and operational sustainability costs by replacing obsolete components.

BAE Systems' enhanced on-board power management solution will double the electrical power of most military vehicles, producing 70kW, significantly increasing the mission effectiveness of ground forces in theatre. **SP**

Northrop Grumman wins DESP II contract

The US Air Force has awarded Northrop Grumman Corporation an indefinite delivery, indefinite quantity contract for its Design and Engineering Support Programme (DESP III). Northrop Grumman is one of 26 companies to receive awards under the contract, which has an overall ceiling valued at \$1.9 billion.

The DESP III contract is specifically established with Air Force Material Command, but it may be used by all Department of Defense (DoD) agencies.

"Our sustained performance and innovative logistics coupled with more than 20 years of supporting earlier versions of this contract were paramount in our selection for one of the DESP III awards," said David Gustafson, DESP III Programme Manager, Northrop Grumman Technical Services.

Under the DESP III contract, Northrop Grumman will compete for individual task orders focused on improving life cycle costs, operational life, performance and sustainment of DoD weapon systems. The contract vehicle has a seven-year period of performance. **SP**





BAE wins \$148 million orders for Caiman MRAP

BAE Systems has received three delivery orders from the US Marine Corps, totalling more than \$148 million, for continued support of Caiman multi theatre vehicles (MTV).

Work on these orders includes: providing 371 Caiman MTV rolling chassis with conversion kits, and adaptable underbody survivability kits; providing continental United States integration and enhancements of 1,040 Caiman MTVs and procuring kits for a series of enhancements to the Caiman MTV.

“These orders will continue the cost-effective upgrading of currently fielded Caiman vehicles. The upgrades provide an unparalleled combination of adaptable, high-level protection and vehicle cross-country agility, while retaining the Caiman’s ability to carry 11 combat personnel effectively,” said Chris Chambers, Vice President and General Manager of Tactical Wheeled Vehicles for BAE Systems.

“The lessons we’ve learned from our current integration of Caiman vehicles in Kuwait will allow us to quickly and efficiently return the vehicles, with significant enhancements, to our troops.”

Work on all three orders will be performed at the BAE Systems Sealy, Texas facility. The orders were awarded by the US Marine Corps System Command and deliveries are planned to continue into 2013.

Caiman MTV provides an effective combination of interior capacity, tactical mobility, operator comfort and survivability. Caiman MTV achieves greater survivability through an enhanced monolithic floor, a strengthened chassis frame and highly effective blast absorbing seats. The vehicle’s improved mobility is achieved with a greater vehicle track width, a strong independent suspension and an upgraded power train. **SP**

Boeing and IAI mark 10 years of cooperation

Boeing has renewed its work agreement with Israel Aerospace Industries (IAI) on the Arrow weapon system, and enhanced the IAI-Boeing strategic teaming agreement to explore and develop new opportunities in the missile defence arena.

“The Arrow programme demonstrates Boeing’s commitment to developing international missile defence partnerships around the globe,” said Boeing Network & Space Systems President Roger Krone. “We are pleased to mark this 10-year milestone by expanding our cooperation on missile defense initiatives with our partner IAI.”

“This new agreement is the next logical step in our relationship with Boeing and a strong opportunity for both companies to play a bigger role in the missile defence market. It is based on a strong foundation of successful cooperation,” said Itzhak Nissan, IAI President and CEO.

“Boeing’s relationship with IAI has produced an innovative, versatile and affordable advanced missile defence capability. We look forward to our continued partnership and development of the next generation of Arrow interceptor,” said Greg Hyslop, Vice President and General Manager of Boeing Strategic Missile and Defense Systems. **SP**

US Army chemical weapons stockpile destroyed

The US Army Chemical Materials Agency completed the destruction of the chemical weapons stockpile at Deseret Chemical Depot in Utah recently.

With the elimination of the Utah chemical weapons stockpile, Chemical Materials Agency (CMA), has safely destroyed nearly 90 per cent of the nation’s stockpile of chemical agent and has successfully completed its mission to destroy all chemical agent munitions and items declared at entry into force of the Chemical Weapons Convention (CWC) and assigned to CMA for destruction.

The CWC, an international treaty ratified by the United States in April 1997, required the complete destruction of the nation’s chemical weapons stockpile by April 2007. The United States was granted a five-year extension to April 2012 as allowed by the treaty.

“Completing destruction of this stockpile mission is a worthy

and important accomplishment,” said Secretary of the Army John McHugh. “This demonstrates our commitment to the elimination of chemical weapons, enhancing safety and security for our workforce, our communities and the nation.”

The safe destruction of 27,473.65 tonnes of nerve and blister agents represents 89.75 per cent of the nation’s chemical agent stockpile and is the culmination of more than 20 years of work by thousands of men and women at seven chemical demilitarisation facilities located around the nation.

“CMA’s workforce, government and contractor has shown the utmost dedication to our mission,” said CMA Director Conrad Whyne. “Many of them have committed their professional lives to chemical weapons disposal. It was only through their dedication and expertise that CMA and the Army were able to complete this mission.”

The completion of CMA’s chemical stockpile elimination mission was accomplished at the Tooele Chemical Agent Disposal Facility, or TOCDF, located at Deseret Chemical Depot, known as DCD. **SP**



LT GENERAL (RETD)
PC. KATOCH

Return of the Machiavellian

Pakistan's political economy of exporting terrorism as a foreign policy tool, massive corruption at home and the resultant ever growing reservoir of economically deprived youngsters who will fill ranks of extremists and suicide bombers will continue

PHOTOGRAPH: Wikipedia

It was amusing to see TV debates about former President of Pakistan General Pervez Musharraf's impending homecoming, during which, Pakistani speakers vehemently denied that their military/Inter-Services Intelligence (ISI) knew of Osama bin Laden's presence in Abbottabad. This despite Ziauddin Butt, former Pakistan Army Chief, revealing at a conference on Pakistan-US relations in October 2011 that Brigadier Ijaz Shah (Director General Intelligence Bureau, Pakistan till 2008) had kept Osama in the Intelligence Bureau safe house in Abbottabad with knowledge of Pervez Musharraf and possibly current chief General Parvez Kayani. He repeated this in an interview with *Dawn News* on December 8, 2011.

An article by Altaf Hassan Qureshi in an Urdu daily in December 2011 reinforced the complicity. *The Terrorism Monitor* of May 5, 2011 too had hinted the Abbottabad compound was being used as an ISI safe house. Belief of Kayani and Shuja Pasha, DG ISI being in dark about Osama's presence stands negated.

In 2011, General Musharraf had announced plans of returning to Pakistan, launch his political party and rule Pakistan again. Possibility of him having orchestrated the 'memogate' in conjunction Mansoor Ijaz (ISI stooge) and ISI cannot be discounted, as indicative from his specifying dates of his return to Pakistan in early 2012. Having nurtured Kayani, Musharraf appears confident of a second win. He would do well to read Pakistan's history where loyalty gets replaced last minute by deceit and violence; what Zia-ul-Haq did to Zulfikar Bhutto, Musharraf did to Nawaz Sharif, plus orchestrating Benazir Bhutto's assassination for which warrants for his arrest have been issued in Pakistan? Even Imran Khan, with whose political party Musharraf appears to be negotiating, scoffs at the proposed return of Musharraf to Pakistan, stating he would not like to be the insurance company giving life insurance to Musharraf.

In his 11-year rule of Pakistan, Musharraf ensured that in the foreseeable future Pakistan continues to support the Taliban not only for fear of rebellion

across the NWFP, FATA and areas astride the Durand Line but more to achieve the cherished 'strategic depth', continue as 'balancer' state in strategic sights of US and China, keep control of terror export to India and Afghanistan, receive continued financing for jihad by countries like Saudi Arabia, etc. He ensured that no-go tribal areas of Pakistan became strongholds of Afghan insurgency and Afghan refugee camps were converted into major Taliban training camps, facilitating induction of Chinese military advisors to the Taliban and Chinese weaponry including shoulder fired AD missiles.

Notwithstanding current politico-military spat in Pakistan, her present show of constrained friendship with India is opportunistic. The civil government is too weak and the military's hold over 'every sector' of Pakistan too strong with retired and deputed officers occupying plum positions. This implies that Pakistan's political economy of exporting terrorism as a foreign policy tool, massive corruption at home and the resultant ever growing reservoir of economically deprived youngsters who will fill ranks of extremists and suicide bombers will continue. JuD, the second face of LeT, is not even banned in Pakistan.



While Pakistan will never give up Kashmir, Musharraf had implicitly stated, "Even if the Kashmir problem is resolved, jihad against India will continue"; also adding as President, "There is not a single terrorist on Pakistani soil." His refusal to be present at Lahore during the Prime Minister's A.B. Vajpayee's bus voyage and being master architect of the Kargil intrusions are established facts. In his autobiography authored as President of Pakistan, he refers to India twice as "the most devious enemy." Those who still consider him as "the best bet for India" need fresh thinking caps. Return of Machiavellian Musharraf to Pakistan cannot be good for India as it only bodes more evil. **SP**

The views expressed herein are the personal views of the author.



US Air Force leaders bank on F-22, F-35 capabilities

Fifth-generation fighter aircraft are key to America maintaining domain dominance in the years ahead, US Air Force officials claimed during a media roundtable in the Pentagon on January 24.

Lt General Christopher D. Miller, Deputy Chief of Staff for Strategic Plans and Programmes, and Major General Noel T. “Tom” Jones, the Service’s Director for operation capability requirements, said the technology – exemplified in the F-22 and F-35 – assumes greater importance in combating growing anti-access, area-denial capabilities.

Fifth-generation aircraft are particularly valuable as part of the new defense strategy guidance that President Barack Obama unveiled here earlier this month, they said. That strategy explicitly affirms that the United States military must be able to defeat anti-access, area-denial threats.

“This is not a new thing,” Miller said. “Military operations have operated in anti-access environments probably since the beginning of time. But what is different, and why fifth-generation aircraft is relevant to that, is that operating in anti-access environments continues to become more complex and challenging.”

There is a continuing competition between nations developing anti-access capabilities and others devising ways to defeat that, the general said. “Fifth-generation aircraft are a key ability that the Air Force is bringing to the nation’s ability to operate in those environments,” he added.

The Air Force has flown against anti-access environments since it was founded. American fighters countered this capability in the skies over Korea and Vietnam. Airmen faced off against surface-to-air missiles ringing Hanoi. In the Persian Gulf War, airmen defeated the ground-to-air threat over Iraq, and most recently, they knocked out the anti-access capabilities around Tripoli.

But missile technology has become more complex and more difficult to counter. Command-and-control capabilities have grown. This will require a new set of capabilities flying against them, Jones told reporters. “The fifth-generation capabilities that the F-22 and F-35 possess will allow us to deal with that environment,” he said.

F-22s and F-35s bring manoeuvrability, survivability, advanced avionics and stealth technology to the fight. Both planes are multi-role capable, able to fight air-to-air and air-to-ground. **SP**



Lockheed Martin delivers fourth upgraded CBP P-3 Orion in record time

Lockheed Martin delivered the fourth P-3 Orion with new mid-life upgrade (MLU) modifications to US Customs and Border Protection two months ahead of schedule.

The MLU installation and phase depot maintenance (PDM) were accomplished in record time of 11 months at Lockheed Martin’s Greenville facility. “I am very proud of the Lockheed Martin team in Greenville for demonstrating that we can provide significant value with our OEM knowledge, high quality work and our commitment to meeting our customer’s delivery schedule,” said Ray Burick, Vice President for P-3 Programme and Greenville Operations.

The MLU replaces all fatigue life-limiting structures with enhanced-design components and incorporates a new metal alloy that is five times more corrosion resistant than the original material, greatly reducing the cost of ownership for P-3 operators. The MLU solution removes current aircraft flight restrictions and extends the structural service life of the P-3 up to 15,000 hours, adding more than 20 years of operational use.

The P-3 Orion is the standard for maritime patrol and reconnaissance, and is used for homeland security, hurricane reconnaissance, anti-piracy operations, humanitarian relief, search and rescue, intelligence gathering, anti-submarine warfare and, recently, to assist in air traffic control and natural disaster relief support. **SP**

Seoul orders 20 FA-50 attack aircraft

With the New Year barely under way, South Korea is once again demonstrating a determination to build a formidable military force capable of dealing with potential enemies. The government has signed a \$600 million deal with Korea Aerospace Industries (KAI) for 20 FA-50 fighter/attack aircraft based on the highly regarded T-50 advanced jet trainer.

KAI said the aircraft will be delivered between 2013 and 2014. The FA-50 is a lightweight fighter/attack aircraft incorporating the most advanced technology available in the T-50 Golden Eagle family of aircraft.

The FA-50 is built to carry a weapon’s payload of 9,920 pounds that includes Boeing’s joint direct attack munitions and Textron’s CBU-97 sensor fused weapon. In addition, the FA-50 is also fitted with a 20mm cannon and is configured to carry air-to-air missiles. **SP**



Eurocopter test flying Albanian Super Pumas

Eurocopter is test flying and preparing to deliver the first AS532AL cougars to the Albanian Armed Forces. The first of five aircraft ordered, FA-630, has been flying from the company's plant at Marignane near Marseille since late last year.

Albania ordered the helicopters under a €78.6 million contract in December 2009 and all five aircraft will be delivered by early 2013. The Cougars are the first new aircraft purchase made by the Albanian Ministry of Defence since the end of the Cold War. **SP**

Marine Osprey squadron flies last mission of Afghanistan deployment

A Marine Corps MV-22B Osprey squadron flew its final combat mission, January 17, to complete its deployment to Afghanistan. Marine Medium Tiltrotor Squadron 162 has been deployed at Camp Bastion, Afghanistan, for more than six months. The Marines will soon return to Marine Corps Air Station New River, North Carolina.

The squadron's final mission in Afghanistan was to transport Marines with 1st Battalion, 8th Marine Regiment to a small patrol base in Helmand province, who will relieve Marines of 1st Battalion, 6th Marine Regiment,

"These Marines are extremely proficient, and helpful to us 'ground pounders,'" said Staff Sgt. Ricky Lara, a platoon sergeant with 1st Battalion, 8th Marine Regiment. "My guys have a lot to worry about once we get on the ground but in the air we know we are in the good hands of our fellow Marines." **SP**

Sukhoi begins flight tests of the 3rd serial Su-35S

The 3rd serial multi-purpose fighter Su-35S-3 piloted by test pilot Taras Artsebarsky recently took off the airfield of the Komsomolsk-on-Amur Aircraft Production Association named after Yuri Gagarin (KnAAPO).

Various modes of propulsion and integrated control system as well as stability and controllability characteristics were tested

for more than two hours. Operation of engines, systems and equipment proved to be flawless.

The Su-35 fighters have already flown more than 400 flights on the flight tests programme. The first and second Su-35s were delivered to the 929th State Flight Test Center (GLITS) for the state joint tests (SJT), and on August 15 last year they started to implement the agreed programme. At the same time the first serial production fighter — Su-35S-1 has also joined the programme.

The Su-35 is a thoroughly upgraded super-maneuverable multi-role fighter of the 4++ generation. It employs technologies of the fifth generation that assure its superiority over similar class fighters. **SP**

Indra develops a maritime surveillance light aircraft

Indra, the premier IT company in Spain and a leading IT multinational in Europe, is working on the development of a new maritime surveillance light aircraft in collaboration with Italian aircraft manufacturer Tecnam, firms Selex Galileo, FLIR Systems and remote sensing and sensor integration company Airborne Technologies.

The five partners seek to develop an aircraft equipped to provide state-of-the-art surveillance at a more competitive cost in terms of acquisition and operation. The aircraft will be ready to engage in rescue missions, protection of fishing fleets and environment; and surveillance of illegal trafficking of either people or drugs, among others. The aircraft will be ready to enter service by the end of 2012.

This aircraft will patrol those maritime zones usually kept under surveillance by coastguards with medium-size helicopters for a considerably reduced cost and highly more efficient as it will be equipped with a thorough maritime surveillance system (radar, AIS vessel ID system and a cutting-edge electroptical device). **SP**



New AWACS plane enters Russian Air Force service

A modernised A-50U Mainstay airborne warning and control system (AWACS) aircraft entered service with the Russian Air Force, Defense Ministry spokesman Colonel Vladimir Drik said.

The aircraft, which has an advanced onboard computer, satellite communication and radar systems, was delivered to the Air Force in October and started flight tests. It will participate in all major military exercises this year, the spokesman added.

The aircraft now has the capability to detect various types of flying targets, including helicopters, cruise missiles and supersonic aircraft. The Beriev A-50, based on the Ilyushin Il-76 transport, first flew in 1978. It entered service in 1984, with about 40 produced by 1992. The A-50 can track up to 10 fighter aircraft for either air-to-air interception or air-to-ground attack missions. **SP**



PZL-Swidnik wins Polish contracts

PZL-Swidnik, an AgustaWestland company, has signed contracts with the Polish Ministry of National Defence valued at approximately PLN380 million net (€90 million) for the supply of five W-3WA Sokół helicopters and the upgrade of 14 helicopters. The manufacture and upgrading activities will be undertaken at the PZL-Swidnik factory in Poland.

The five new W-3WA Sokół helicopters will be configured for VIP transport and used by the Polish Air Force to provide transport services for senior military and government personnel. Featuring outstanding operational capability, the W-3A has proven to be a very effective, rugged and reliable helicopter in all conditions. Deliv-



eries of the five aircraft will be completed by the end of 2013.

Separate contracts for the upgrading of 14 helicopters have also been signed comprising the upgrade of four W-3 Sokół helicopters to W-3PL Głuszec armed configuration, the overhaul and upgrade of eight Mi-2 helicopters and the upgrade of two W-3VIP helicopters with a FADEC (full authority digital engine control) system.

Deliveries of the upgraded W-3PL Głuszec helicopters will be completed in the second half of 2014 and represents the second batch in a plan to upgrade a total of 32 helicopters in the next five to six years, forming the backbone of Poland's combat support capability. **SP**

Boeing receives additional US Air Force JDAM contract

Boeing received a \$126 million contract from the US Air Force for approximately 5,000 joint direct attack munition (JDAM) tail kits. Deliveries will begin in June 2013 and continue through May 2014.

This is Boeing's third major US Air Force contract within a year for conventional JDAM kits. Boeing received an \$88 million contract for nearly 3,500 kits in January 2011 and a \$92 million contract for an additional 4,000 kits in March.

JDAM is a low-cost guidance kit that converts existing unguided free-fall bombs into near precision-guided weapons. Boeing intentionally designed its JDAM kit to be modular, allowing for the product to mature with a variety of technological upgrades such as wing kits that triple its range, improved immunity to GPS jamming and an all-weather radar sensor. **SP**



Switzerland is Centaur launch customer

Aurora Flight Sciences announced that the Swiss Department of Defence has become the first customer for the Centaur optionally-piloted aircraft (OPA).

Armasuisse, an official procurement agency of the Swiss Department of Defence with its own flight test centre, will use the Centaur as a flying test bed for new sensors and sense and avoid equipment required to operate unmanned aircraft systems (UAS).

Switzerland is a European leader in unmanned aircraft operations in their complex and dense airspace. The Swiss Air Force has been operating UAS for more than 10 years in the NAS, during day time operations with a chase plane in non-segregated airspace and during night time operations without a chase plane.

The aircraft will be based in Emmen, Switzerland. "Reliability, safety, efficiency and low noise are essential features of Centaur," said Armasuisse Programme Manager Roland Ledermann. "This hybrid aircraft is uniquely suited to the needs of customers who seek the advantages of a remotely piloted aircraft but must also operate in crowded skies." **SP**



Ultra wins Embraer KC-390 contracts

Ultra has announced that its control business has been awarded two contracts by Embraer Defense and Security for its KC-390 military transport aircraft. The awards, announced January 17, 2012, cover a range of electronic controllers and position sensor systems on the KC-390.

The first award is for all the electronic controls and sensors for the landing gear, nose wheel steering and associated hydraulics. The second award is for all the electronic controls and sensors for the cargo door system which comprises the cargo door, ramp, ramp extension, paratrooper air deflector, stabiliser struts and associated hydraulics. Under the contract, Ultra will design and develop all hardware and software and support the integration with other systems on the aircraft. **SP**

PHOTOGRAPHS: US Navy, Aurora Flight Sciences, AgustaWestland



nEUROn demonstrator presented to industrial team

The nEUROn, European UCAV technology demonstrator, has been officially presented to the representatives of the six participating countries by Charles Edelstenne, Chairman & CEO of Dassault Aviation. Serge Dassault, Honorary Chairman of the company, as well as the representatives of the nEUROn industrial team—Saab (Sweden), Alenia Aermacchi (Italy), EADS-CASA (Spain), HAI (Greece) and RUAG (Switzerland)—attended the ceremony.

This presentation is a major milestone after five years of design, development, production, assembly and the first static tests of the nEUROn demonstrator. The first engine tests will be performed very soon, aiming at a first flight mid-2012. Afterwards, a complete sequence of test flights will take place during two years in France, Sweden and Italy. These tests will address flight qualities, stealthiness, air-to-ground weapon firing from an internal bay, integration into a C4i environment as well as the insertion of uninhabited platform in airspace. **SP**



USS Simpson and Fire Scout set sail for Africa

The MQ-8B Fire Scout, the Navy's only unmanned aircraft to operate on land and at sea departed on January 17 from Mayport, Florida, aboard USS Simpson (FFG 56) for a six-month deployment to western Africa.



Personnel from Helicopter Anti-Submarine Squadron Light (HSL) 60 Detachment 4 and Northrop Grumman took Fire Scout on its third at-sea deployment aboard a guided missile frigate. Typically deployed as a compliment to the manned H-60 helicopter, this is the Fire Scout's first solo mission. **SP**

Thales and Aerovisión present FRONTEX with UAV for border control

Thales and Aerovisión have given a real flight demonstration of the UAV Fulmar for the European Agency, Frontex, the organisation in charge of coordinating the border control operations of the European Union member states.

Fulmar is a wholly Spanish project that is a global solution that uses the maritime surveillance systems of Thales Group. These systems supply images and video in real time and integrate the information in a security system, as is the case with border control. Such systems facilitate surveillance and control of maritime and border traffic and can provide support to rescue operations.

The UAV Fulmar is a small-size model (3.1 metres) weighing

only 19 kilos that can fly at a height of 3,000 metres and achieve 150 kilometres per hour, with an 8-hour flight range that would allow it to fly up to 800 kilometres without having to refuel. **SP**

Pakistan develops indigenous attack grade UAV Burraq

Pakistan is developing an indigenous attack grade UAV, known as Burraq, which will significantly increase the procurement of drones, surveillance equipment and satellites for ground monitoring. The country is also expected to procure technology to develop drones that have attack capabilities.

Pakistan is expected to make procurements in areas such as submarines and submarine technology, drones for attack-grade unmanned aerial vehicles (UAVs), surveillance equipment and satellites for ground monitoring, fighter jets and associated support systems, air-to-air missile systems, attack helicopters and engines for the development of aerial refuelling aircraft. **SP**

Russia allocates \$160 million for UAV development

Russian Helicopters has received 5 billion rubles (\$160 million) from the federal budget for the development of three types of UAV.

After charging that smaller domestic developers wasted public funds – and pointedly purchasing Israeli drones for military trials – the Defence Ministry has switched to a big holding with sufficient capacity to develop and produce indigenous UAVs.

A prototype of a short-range drone, Ka-135, with carrying capacity of up to 100 kg, must be developed by 2015. A heavy-weight UAV, dubbed Albatros, is expected to be developed by 2017. It can be used as a strike or transport drone. **SP**



Northrop Grumman statement on Global Hawk

Northrop Grumman Corporation has released the following statement on the Global Hawk Block 30 programme: “The Pentagon announced that it is planning to cancel the Global Hawk Block 30 programme and plans to perform this mission with the U-2 aircraft. Northrop Grumman is disappointed with the Pentagon’s decision, and plans to work with Pentagon to assess alternatives to programme termination.

The Global Hawk programme has demonstrated its utility in US military operations in Iraq, Afghanistan and Libya, as well as its utility in humanitarian operations in Japan and Haiti. Just a few months ago, the Pentagon published an acquisition decision memorandum regarding Global Hawk Block 30 that stated: “The continua-



tion of the programme is essential to the national security...there are no alternatives to the programme which will provide acceptable capability to meet the joint military requirement at less cost.”

“Global Hawk is the modern solution to providing surveillance. It provides long duration persistent surveillance, and collects information using multiple sensors on the platform. In contrast, the ageing U-2 programme, first introduced in the 1950s, places pilots in danger, has limited flight duration, and provides limited sensor capacity. Extending the U-2’s service life also represents additional investment requirements for that programme.

“Northrop Grumman is committed to working with our customers to provide the best solutions for our country and our allies. We are pleased with the continuing support for the Global Hawk Block 40 system, as well as for the Navy’s broad area maritime surveillance system and our other unmanned systems,” states the Northrop Grumman statement. ^{SP}



Rheinmetall and Cassidian pool their unmanned aerial systems activities

Rheinmetall and Cassidian have agreed to pursue Rheinmetall’s unmanned aerial systems (UAS) activities together in a joint venture. It was agreed in a contract that Cassidian should hold 51 per cent and Rheinmetall 49 per cent of the shares in the newly established joint venture. The ownership interests are to be assigned to Cassidian by mid-2012 once all the necessary authorisations and antitrust approvals have been granted.

Stefan Zoller, CEO of Cassidian, said to the agreed creation of the joint venture: “As Europe’s leading provider of unmanned aerial systems, we see this as a logical step towards expanding our present UAS programmes. We can offer our global customers a full product range of customised solutions, including tactical UAS and UAS for medium and high-altitude.”

Klaus Eberhardt, Chairman of the Executive Board of Rheinmetall AG, stressed: “First and foremost, our goal is to strengthen the airborne systems product unit in a sustained way, providing it with new opportunities for marketing its state-of-the-art products in years to come. And of course we also want our employees to have a secure future in Bremen, a traditional centre of German high-tech excellence that will continue to host our Defence Electronics and Simulation and Training divisions.” ^{SP}

AAI unveils Shadow Knight UAV for MRMUAS

AAI Corporation is proposing a new vertical-takeoff-and-landing (VTOL) design for the US Navy’s medium-range maritime unmanned aerial system (MRMUAS) requirement.

The Shadow Knight is based on the slowed-rotor/compound (SR/C) concept licensed from Carter Aviation Technologies, but with changes to enable a true hover capability for operation from ships.

AAI has been investigating Carter’s technology because it provides a VTOL capability similar to a helicopter without the complexity of a fully powered rotor, promising reduced acquisition and maintenance costs. ^{SP}

GA wins \$30 million to support Gray Eagle UAV

General Atomic’s Aeronautical Systems was awarded a \$30,342,272 cost-plus-incentive-fee contract. The award will provide for the modification of an existing contract in support of the MQ-1C Gray Eagle unmanned aircraft system quick reaction capability. Work will be performed in Poway, California, with an estimated completion date of May 7, 2012. ^{SP}



India, Myanmar hold talks on border issues

The 17th National level meeting between India and Myanmar concluded at Nay Pyi Taw, Myanmar. The Indian delegation was led by R.K. Singh, Home Secretary, and the Myanmar delegation was led by Brigadier General Kyaw Zan Myint, Deputy Union Minister, Ministry of Home Affairs, Government of the Republic of the Union of Myanmar.

Recalling the traditionally close relationship between India and Myanmar, the leaders of India and Myanmar delegation expressed commitment to further strengthen the cooperation between the two countries in economic and developmental areas, closer people to people contact and maintaining peace and tranquillity on the border.

The Home Secretary gave an overview of the main areas of concern to India and expressed hope that these could be discussed in the spirit of trust and friendship between India and Myanmar. Both sides discussed in detail security-related issues like presence of Indian Insurgent Groups (IIGs) along Indo-Myanmar border, exchange of intelligence information and arms smuggling.

The leader of Indian delegation mentioned about IIGs camps and training facilities in Myanmar and sought Myanmar's cooperation in dealing with IIG's activities. The Home Secretary especially mentioned that IIGs are planning large-scale disturbances in the forthcoming elections in 2012 in Manipur. The leader of Myanmar delegation assured that Myanmar would never allow insurgents to use its territory to

engage in any hostile activities against its neighbour India.

The two sides agreed to maintain closer interaction between the nodal points and respective commanding officers of border guarding forces of the two countries for sharing real time intelligence. Both sides expressed satisfaction at the meetings of the Border Liaison Offices (BLOs) at DC/SP level at Moreh/Tamu and Zowakhatar/Rhi to discuss measures for combating arms smuggling, drug trafficking, smuggling of wildlife parts and other issues and it was decided that BLO meetings be held more frequently.

It was agreed to establish a new BLO at Ukhru (India)-Somra (Myanmar). The Indian leader agreed to provide the requisite communication facilities for the additional BLO and Commanding Officers level interactions at the border.

In order to trace the recipients of the arms smuggling in India, the leader of Indian delegation requested Myanmar to share interrogation reports of arms smugglers arrested by Myanmar security forces. The leader of the Myanmar delegation agreed to share these reports with India.

Both sides expressed satisfaction over decline in drug trafficking and agreed to regular interaction between drug control agencies of both countries at DG level and DDG level to eliminate the menace of drug trafficking.

India offered training and any other support that Myanmar may require to combat drug trafficking. They also discussed illegal wildlife trafficking, tourism cooperation, training of Myanmar security forces in India and repatriation issues of Myanmar fishermen in Indian prisons and Indian prisoners in Myanmar. India offered all possible support to assist Myanmar in its pursuit for better connectivity and overall development. **SP**

Rajiv new DG of CISF

Rajiv, IPS, has been appointed as Director General, Central Industrial Security Force (CISF). He is currently working as Director General, National Disaster Response Force and Civil Defence (NDRF&CD). He is an IPS officer of 1975 batch, UP Cadre. **SP**

India and Nepal pact on countering crossborder crime

India and Nepal recently discussed cooperation in countering cross-border crimes and terrorist activities during Home Secretary level talks between the two countries. They discussed wide-ranging issues including countering circulation of fake Indian currency notes, smuggling of arms/ammunitions, trafficking of narcotics and psychotropic substances and misuse of SIM cards.

Sharing of information/intelligence reports, progress in establishment of integrated check posts and border roads and India's support to training and capacity building of Nepal's security apparatus were also discussed.

The Indian delegation was led by R.K. Singh, Secretary,

Ministry of Home Affairs and the Nepalese delegation was led by Sushil Jung Bahadur Rana, Secretary, Ministry of Home Affairs. Singh appreciated the assurance of Nepalese Government for not allowing its territory to be used for activities inimical to India's interest and also assured Nepal of India's commitment to provide all necessary cooperation and assistance.

The meeting was held in a cordial environment and both the countries expressed their satisfaction on the outcome of the issues deliberated during the meeting and hoped it will go a long way in addressing mutual security concerns, enhancing cooperation and friendly relations between the two countries. **SP**

Nuclear security issues discussed

New Delhi flagged off a two-day international meet to discuss matters pertaining to nuclear security. In the meeting, representatives of heads of 49 nations shared thoughts to prevent nuclear terrorism.

Addressing the dignitaries, India's Foreign Secretary Ranjan Mathai hoped the meet would prepare a suitable ground for the upcoming Nuclear Security Summit (NSS) to be hosted by Seoul in March this year. **SP**



Austrian Eurofighter on duty during World Economic Forum in Davos

From the January 24-29, Austrian Eurofighter Typhoons were in service protecting the skies over the World Economic Forum in Davos, Switzerland.

The operation known as Daedalus 12 saw four Austrian Eurofighters deployed to protect the area in a temporary no-fly zone over Western Austria and Davos in particular. The Eurofighter worked alongside Austrian Air Force turboprop PC-7 trainers and OH-58 Kiowa helicopters protecting the skies against potential 'slow moving aerial threats' for the duration of the Forum.

This task, in full coordination with the Swiss authorities, demonstrated the perfect interoperability of the Alpine Air defence system and builds on the successful experience gained from previous operations including the Euro 2008 football



championships in Austria and Switzerland as well as the World Economic Forum meetings in Davos in 2011. **SP**

US strategy for global supply chain security

Secretary of Homeland Security Janet Napolitano has unveiled the Obama administrations National Strategy for Global Supply Chain Security at the World Economic Forum in Davos, Switzerland.

The Department of Homeland Security is committed to facilitating legitimate trade and travel, while preventing terrorists from exploiting supply chains, protecting transportation systems from attacks and disruptions, and increasing the resilience of global supply chains.

We must continue to strengthen global supply chains to ensure that they operate effectively in time of crisis; recover quickly from disruptions; and facilitate international trade and travel, said Secretary Napolitano. As a part of this effort, we look forward to working closely with our international partners in the public and private sector to build a more resilient global supply chain.

The National Strategy for Global Supply Chain Security outlines clear goals to promote the efficient and secure movement of goods and foster a resilient supply chain system. It also provides guidance for the US Government and crucial domestic, international, public and private stakeholders who share a common interest in the security and resiliency of the global supply chain.

The international community made significant progress on



PHOTOGRAPHS: Forgas Amadas Austríacas/Osterreichs Bundesheer, Department of Home Affairs, US

this front through Project Global Shieldnow Programme Global Shield launched by DHS with the World Customs Organization, the UN Office on Drugs and Crime, and Interpol. Programme Global Shield is an initiative to protect the supply chain by preventing the theft or illegal diversion of precursor chemicals that can be used to make improvised explosive devices (IEDs). Since November 2010, 89 participating nations and international organisations have been sharing information about the export of 14 precursor chemicals used in IEDs. As of January 2012, Programme Global Shield has accounted for seizures of chemical precursors totalling over 62 tonnes and 31 arrests related to the illicit diversion of these chemicals. **SP**

Resident Identity Cards issued in Andaman Islands

The Union Home Minister P. Chidambaram, recently launched the first batch of Resident Identity Cards (RIC) under the coastal National Population Register (NPR) project at Porthrapur village in South Andaman district of Andaman & Nicobar Islands in the presence of Lt Governor of Andaman & Nicobar Islands, Lt General Bhupender Singh.

The RIC is a smart card having 64 KB micro processor chip. The National Institute of Design (NID), Ahmedabad, has finalized the visual layout of the card. It incorporates several physical security features like Guilloché patterns, hot stamped hologram and micro text, etc.

The Government of India had decided to create a National Population Register in the country. As a first step, the NPR project was taken up in coastal areas of 9 maritime states (Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Orissa and West Bengal) and 4 UTs (Andaman & Nicobar, Puducherry, Lakshadweep and Daman & Diu) as one of the measures for strengthening the security of the coastline of the country. **SP**



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TORC Robotics to tackle high-speed autonomous vehicle navigation challenges

TORC Robotics has been subcontracted through the Robotics Technology Consortium (RTC) to develop an advanced sensor fusion system for the Department of Defense that will significantly increase high-speed obstacle detection range. This long-range obstacle detection, classification and prediction system will enhance autonomous navigation capabilities for unmanned ground vehicles operating in mission-relevant environments at speeds up to 100 kph. The system will be capable of detecting and maintaining a variety of tracking statistics for each obstacle. TORC will incorporate these enhanced capabilities with its core autonomy framework for future availability in its AutoNav product line.

To support integration with the project sponsor's autonomy framework, TORC will develop an application programming interface (API) for the advanced sensor fusion software, and build a hardware prototype capable of installation on a range of vehicles including the HMMWV and LMTV. The system fuses asynchronous and heterogeneous sensor modalities through a joint probabilistic data association approach to reduce false positive/negative data, which



is essential to high-speed autonomous navigation. TORC will achieve long-range detection and classification through a combination of commercial-off-the-shelf LIDAR, radar and vision technologies from Ibeo, Velodyne, and Smartmicro. TORC will assess sensor and fusion performance at high-speed under a variety of man-made weather conditions to include rain, dense fog and snow at the Virginia Tech Transportation Institute (VTTI) Smart Road.

“Despite recent deployments of full-sized autonomous vehicles for operational assessments in Afghanistan, most are still quite limited in their ability to operate autonomously and at high speed outside of their pre-planned scenarios,” states Andrew Culhane, Business Development Manager at TORC Robotics, “The reality is that military UGVs need to be able to operate autonomously within complex mission environments while keeping pace with the force. In order for that to happen, UGV perception technology must be capable of detecting, classifying and predicting obstacles at longer ranges while moving at operational speeds.”

TORC Robotics will leverage software initially conceptualised under a DARPA SBIR now under further research on the RTC Sensor-based Collision Prediction project. This project provides the software architecture and obstacle prediction capabilities that TORC will extend to meet the requirements for this project. The primary research platform for this project is the ByWire XGV™, a drive-by-wire controlled ground robotics vehicle. **SP**

New York Police working on gun detection technology

The New York Police Department (NYPD) has taken up a research project to detect concealed guns carried by individuals from as far as 82 feet away.

Raymond Kelly, New York's Police Commissioner, said that the department was working in conjunction with the Department of Defense to develop the technology. The scanner would rely on a type of reverse infrared mapping that reads the energy people emit and pinpoint where that flow is blocked by an object like a gun.

“If something is obstructing the flow of that radiation — for example, a weapon — the device will highlight that object,” Kelly said. “This technology has shown a great deal of promise as a way of detecting weapons without a physical search.” **SP**

Fire suppression technology

Fire in a combat vehicle, aboard a ship or other confined space such as an airplane cockpit puts warfighters at risk.

Today's fire suppression technologies are many decades old and focus largely on disrupting the chemical reactions involved in combustion by spraying water, foams or other chemicals on the flames. The key to transformative firefighting approaches may lie in the fundamentals of fire itself.

While water primarily cools a flame, carbon dioxide suffocates it by diluting the surrounding oxygen. Chemical suppressants such as halons work to disrupt the combustion process. These technologies suffer from limitations such as collateral damage to valuable property, environmental toxicity and limited effectiveness in different types of fire. All existing suppressants are composed of matter and must be physically delivered and dispersed throughout the fire. This limits the rate at which fires can be extinguished and the ability to combat fires in confined spaces or behind obstacles.

According to Matthew Goodman, DARPA Programme Manager, “We successfully suppressed small flames and limited re-ignition of those flames, as well as exhibited the ability to bend flames. These effects, to date are very local—scaling is a challenge that remains to be overcome.”

DARPA's instant fire suppression programme, which ended recently, sought to establish the feasibility of a novel flame-suppression system based on destabilisation of flame plasma with electromagnetic fields and acoustics techniques. The DARPA research team at Harvard University has demonstrated suppression of small methane and related fuel fires by using a hand-held electrode, or wand.

“We've made scientific breakthroughs in our understanding and quantification of the interaction between electromagnetic and acoustic waves with flame plasma,” said Goodman. “Our goal was to advance understanding of this interaction and its applicability to flame plasma for suppressing flames.” **SP**



EADS Board confirms Tom Enders as CEO

The EADS Board of Directors has met on January 26 for one of its regularly scheduled meetings in Amsterdam. During this meeting the following decisions have been taken.

EADS N.V. announces that its Board of Directors has designated Tom Enders to take over the role of CEO when Louis Gallois steps down at the end of his mandate.

Concurrently, Arnaud Lagardère will assume the role of Chairman of the Board presently held by Bodo Uebber.

The change-over was prepared diligently by the Board and results from the application of the succession process under the governance of EADS, which was updated in October 2007. It will take place after the company's Annual General Meeting (AGM) on May 31, 2012. These new mandates carry a five-year term.

Bodo Uebber, the Chairman of the Board, said: "Today's decisions mark a very important milestone in the development of EADS. Having clarity about the Board and management positions enables EADS to build a bright future for the long-term on solid foundations. I am very pleased and proud with the overall composition of the Board of Directors and with the appointments to the management team, especially with its multinational character. I know that my successor Arnaud Lagardère and all of us share the same strong interest and ambitions for EADS." ^{SP}

Dean McCumiskey appointed BAE India Chief Executive

BAE Systems has announced the appointment of Dean McCumiskey as Managing Director and Chief Executive of its India operations with effect from March 2012. Dean is currently Group Chief Information Officer based in the company's London headquarters and will succeed Andrew Gallagher who takes up new responsibilities as BAE Systems' Director of Audit, based in the United Kingdom.



McCumiskey will be responsible for leading the next phase of BAE Systems' business development in India, where the defence, aerospace and security company directly employs around 100

people and has a growing presence through strategic investments in technology sharing and industrial partnerships.

In addition, two joint ventures, Defence Land Systems India (DLSI), a land systems focused company operated in partnership with Mahindra and Mahindra, and BAeHAL, a software engineering joint venture with the Hindustan Aeronautics Limited (HAL), together employ over 350 people.

Commenting on his new role, ahead of moving to New Delhi next month, McCumiskey said: "We have built a solid foundation in India and I look forward to broadening and deepening our involvement in the country's growing defence and security industry in partnership with world-class Indian companies such as Mahindra & Mahindra and HAL."

Dean McCumiskey has deep experience of the global defence, aerospace and security industry, having held senior management positions in both the US and Europe. Prior to taking up the role of Chief Information Officer, he was responsible for business winning activities in Europe, Canada and South America, leading multimillion-dollar campaigns covering the air, land, maritime and security sectors. ^{SP}

Lockheed Martin acquires Procerus Technologies

Lockheed Martin has acquired Procerus Technologies, a company specialising in autopilot and other avionics for micro unmanned aerial systems. The terms of the agreement were not disclosed, but are not material to Lockheed Martin's results.

"This acquisition is consistent with our focus on acquiring capabilities that enhance our product portfolio and align with our customers' strategic priorities," said Bob Stevens, Lockheed Martin Chairman and CEO. "Small unmanned aerial vehicles are low-cost, highly effective tools for our military, and the expertise Procerus brings will enhance the value we offer to our customers."

Founded in 2004 and based in Orem, Utah, Procerus is a privately held company that provides autopilot, targeting and payload technologies for micro UAS to domestic and international governments, as well as industry and academic institutions. Among its key technologies is the Kestrel autopilot system, the smallest and lightest full-featured micro autopilot system on the market – ideal for surveillance and reconnaissance applications. ^{SP}

Airbus Military's future sales opportunities

Airbus Military booked five new orders for its C295/CN235 transports in 2011 while delivering a total of 29 aircraft from its product line during the year, bringing the business unit's overall backlog to 222 aircraft as of December 31, 2011.

The 2011 deliveries were composed of 20 aircraft from its light- and medium-sized airlifter families (10 C295s, seven CN235s and three C212s), along with six A330 Multi Role Tanker Transports (MRTTs) and three modernised P3 maritime aircraft.

Airbus President and CEO Tom Enders said the build-up of A330 MRTT deliveries is underscoring this aircraft's role as the reference in new-generation tanker/transport systems. ^{SP}



Hugh Grant: I was hacked by media

Actor Hugh Grant said recently that he believed his phone was hacked by Britain's tabloid *Mail on Sunday*. Grant told an inquiry into media ethics that a 2007 story about his romantic life could only have been obtained through eavesdropping on his voice mails.

"I cannot for the life of me think of any conceivable source for this story in the *Mail on Sunday* except those voice messages from my mobile phone," he said.

The tabloid published a story alleging that Grant's romance with Jemima Khan was on the rocks because of his conversations with a "plummy voiced" woman the paper identified as a film studio executive. Grant said there was no such woman, but he did receive voice messages from the assistant of a producer friend.

Grant sued the newspaper for libel, and won. **SP**



The Great Train Robbery



The Great Train Robbery is the name given to a £2.6 million train robbery committed on August 8, 1963, at Bridego Railway Bridge, Ledburn near Mentmore in Buckinghamshire, England. The bulk of the stolen money was not recovered. It was probably the largest robbery by value in British history, along with the Baker Street robbery.

The gang of train robbers consisted of 17 full members who were to receive an equal share, including 15 people who were at the actual robbery and two key informants.

The gang of 15 men from London was led by Bruce Reynolds, and assisted by Gordon Goody, Charlie Wilson and Ronald "Buster" Edwards with Roger Cordrey their key electronics expert who was an accomplished train robber already. The two key informants who brought the idea to robbers' attention were solicitor's clerk Brian Field and the unknown "Ulsterman", who has never been identified or caught. The most famous member of the gang, Ronnie Biggs, had only a minor role, which was to bring the replacement train driver, a man known as "Old Pete" (who, it turned out, failed at his task as he could not drive the modern locomotive).

Movie by a similar name was made and was a runaway hit. **SP**

Chilean coup d'état watershed event

The 1973 Chilean coup d'état was a watershed event of the Cold War and the history of Chile. Following an extended period of political unrest between the conservative-dominated Congress of Chile and the socialist-leaning President Salvador Allende, discontent culminated in the latter's downfall in a coup d'état organised by the Chilean military and unofficially endorsed by the Nixon administration and the CIA, which had



covertly worked to spread discontent and opposition against the government. A military junta led by Allende's Commander-in-Chief Augusto Pinochet eventually took control of the government, composed of the heads of the Air Force, Navy, Carabineros (police force) and the Army. Pinochet later assumed power and ended Allende's democratically elected Popular Unity government, instigating a campaign of terror on its supporters which included the murder of former Foreign Minister Orlando Letelier Before Pinochet's rule, Chile had for decades been hailed as a beacon of democracy and political stability in a South America hoarding military juntas and Caudillismo. **SP**

Breach in Facebook security

Facebook is investigating a huge wave of spam attacks that have caused violent and pornographic images to be posted on some users' profile pages.

The incident is one of the worst security breaches in Facebook's history and is raising concerns about the social networking site's security and vulnerability to hackers. **SP**

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