[A Specialized Monthly Journal On Military & Strategic Affairs] 42nd Year | Issue No. 501 | October 2013

NATION SHIELD

EA-18G GROWLER

Electronic Attack Aircraft

Military Education instills loyalty for The Leadership & the Nation

UAE Soft Power: A reading in Dimensions & Effects

EXCLUSIVE

HH Sheikh Saud bin Rashid Al Mu'allah: Nationalization: One of the basic pillars in the development process


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Nation Shield and National Identity

By:
Staff Major\ Yousef Juma AL Hadad
Editor in Chief

The subject of national identity occupies an exceptional space of the attention of our prudent leadership, led by His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE and Supreme Commander of the Armed Forces, may God protect him. This interest is reflected in the balanced plans and policies adopted by the state. It was demonstrated clearly in the discussion of ID topic in mid- 2008, when His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice President, Prime Minister and Ruler of Dubai – May Allah protect him – opened the National Identity Forum organized by the Ministry of Culture and Youth, based on the invitation of His Highness the Head of State to name 2008 as the year of national identity. This comes out of the keenness to base the pillars of national identity on promoting the values of loyalty and affinity to the leadership and dear homeland to the younger generations, and fortifying the community in the face of the overwhelming waves of globalization sweeping the world and the region alike. Any nation without identity does not deserve to have a homeland, any nation without history to refer to and take pride in is not worthy of survival, and any people that lose their national identity will inevitably lose their unity and power. This has been confirmed by His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the State and Supreme Commander of the Armed Forces, by saying, "if one is without identity, he has no existence in the present and has no place in the future."

The media, especially the readable one, being the first line of defense for our national identity, is inherently a strategic tool for the protection, maintenance and expression of the national identity. It is required to interact with the various local issues and deal with them with all transparency, objectivity and responsibility. It is also fully responsible for the protection of citizens morally, religiously, culturally, behaviorally and socially, through its diversified meaningful information material that help to make in the country good citizens who know their rights and duties.

In this context, His Highness Sheikh Abdullah bin Zayed Al Nahyan, Minister of Foreign Affairs and Chairman of the National Media Council, confirmed – while presiding over the meeting of the Advisory Board of the National Media Council - the central importance of the media and its responsibility in the coming stage. He expressed his satisfaction with the role of the UAE media in the service of the country, interaction with national issues, confirmation of loyalty and promotion of national identity. He also pointed out the importance of the new media and the role of social networks in achieving the objectives of the National Action.

For its part, the Nation Shield journal is working to promote the concept of national identity and even set it as a major goal of its current and future strategy and plans, considering that the responsibility for national identity starts and ends with the media. The magazine has been keen to deal with many national issues, present their positive implications and encourage national creations.

The journalistic work in Nation Shield is led by a galaxy of specialized national cadres who bear in mind the national identity and place it at the top of their professional strategy•

Editorial

NATION SHIELD

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Issued By UAE Armed Forces.
Established In August 1971.

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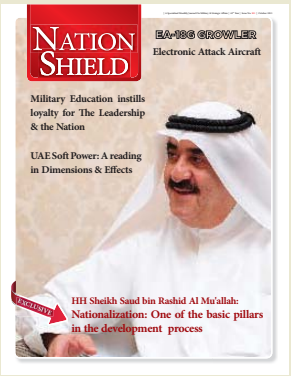

His Highness Sheikh Saud bin Rashid Al Mu'allah, Member of the Supreme Federal Council and Ruler of Umm Al Quwain in an exclusive interview with the Nation Shield Journal

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Advertisements

Record visitor & exhibitor turn out marks DSEi 2013

Highlight was a fascinating variety of naval boats, aircraft and UAVs

DSEi 2013 ended on a hugely successful note, registering a record turnout in terms of visitors and exhibitors. For the first time the number of exhibitors reached the 1,500 mark, including a record 40 international pavilions. This year the show featured six themed zones, each featuring a dedicated seminar and briefing program, the inaugural Medical and Disaster Relief Zone, and the largest ever number of visiting warships moored in the dock adjoining the exhibition halls.

The exhibition, which took place at London's ExCeL Centre from 10 - 13 September, is billed as the world's largest defense and security event and offered the opportunity for representatives from armed forces of various countries to meet with industry to discuss their equipment needs.

Delegations and visitors

More than 30,000 visitors from around the world visited the venue. Senior military and political figures from various governments including ministers, the chiefs of army, air force and navy toured the exhibition.

Global Significance

The global significance of DSEi was highlighted by the presence of two ships from the Republic of Korea's navy, which has included the show in its world tour to mark 60 years since the cessation of hostilities with North Korea. The impressive array of vessels included HMS Sutherland a Type 23 frigate and HMS Tyne a River

SLX Hawk-S

Nation Shield journal participated at DSEi 2013 as part of the first ever UAE pavilion at DSEi

Class offshore patrol vessel, together with ships representing the navies of Germany, the Netherlands and Sweden.

Waterborne Demonstrations

The scenario for this year's daily waterborne capability demonstrations was focused on peacekeeping, providing situational awareness and supporting larger naval forces involved in keeping sea lanes open and secure. The international nature of DSEi's naval proposition was also evident from the breadth of nationalities to be found in the shipyards exhibiting this year. For the first time the likes of Cammell Laird, Lurssen, ThyssenKrupp, Damen, Daewoo and Hyundai Heavy Industries were present, in addition to Asmar, Mazagon Dock, Babcock and BAE among others.

Companies and crafts that took part included Atlas Remote Control Influence Minesweeping System (ARCIMS), The LRAD Corporation, The CTruk demostrated the Twin Hulled Offshore Raider (THOR), Operation Swimmer, General Dynamics C4S International, Datron World Communications Aeryon SkyRangers UAS, MST demonstrated the MST 1200 FRISC RIB, Thales demonstrated the HALCYON, Pontoon Works, Survitec demonstrated their new DSB 7.8m RIB, Damen Interceptor 1102 and Zodiac demonstrated the new H955 OB MACH II Interceptor

Air Power

The air power dimension of DSEI was also very visible, with Wildcat and Merlin Mk II helicopters on display, together with a Spitfire and Eurofighter Typhoon. The range of platforms on display in included an enlarged static platform display area featuring Eurofighter Typhoon and Spitfire, Tektite Industries featured its all-improved range of Infrared (IR) and visible LED strobes, Northrup Grumman demonstrated the Cutlass, Wheelbarrow Mk9, Caliber Mk3 and Caliber T5 UGV platforms in the Demo Area. Key aerospace companies included Rolls-Royce, Raytheon, MBDA and Finmeccanica.

Land Zone

Visitors were able to see the largest ever Land Zone at DSEi 2013. The Land Zone increased to more than 70 dedicated stands and land systems con-

AW101 Royal Navy

CASSIDIAN - OMS110, SERO 450


AMPV

tent displayed by leading players in the global industry, including BAE Systems, General Dynamics, JCB, Land Rover, Navistar, Nexter, Patria, Rheinmetall , Supacat , Iveco, Jankel Armouring and Daimler. Included in the Land Zone were a Mastiff displayed by Selex ES, a PEROCC being displayed by Pearson Engineering and the Typhoon vehicle being displayed by Streit Group.

Unmanned Systems

The Unmanned Systems Showcase once again offered demonstrations from Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicles. Exhibitors which attended DSEI 2013 included: Insitu Inc., showcasing the latest ScanEagle and Integrator UAS products; Recon Robotics' unique Throwbot XT; DST Control's new micro IR payload developed in association with Oculus Systems; and the latest bomb disposal platforms from Northrop Grumman and QinetiQ (Cutlass and Dragonrunner).

The Unmanned Systems Showcase attracted huge media interest globally and was viewed by a high number of DSEI visitors. Visitors were able to watch troops reacting to differing threats, using unmanned systems to respond and control the situation in this unique environment.

Humanitarian & Disaster Relief Zone

The new Humanitarian & Disaster Relief Zone reflected the rising requirements of medical personnel within the armed forces. The Zone showcased the latest equipment from a diverse range of new exhibitors including Lifesaver Systems, RDT and Safe Patient Systems and Prometheus Medical. The Zone's dedicated seminar & briefing programme addressed current topics: NATO co-operation; adopted best practices from Afghanistan and CBRN defence; keeping the military fit; successful rehabilitation; pre-hospital care; developments in Platinum 5 trauma care; and key innovations derived from recent military research.

Highlights

SOPHIE Lite and TACTICOS

Thales UK launched a new lightweight multifunction surveillance and target locator system, SOPHIE Lite. Weighing in at class-leading, fully-operational weight of only 1.6kg, SOPHIE Lite can be deployed in a variety of operational scenarios by both military and civil users. The new ultra-compact system has a fully-integrated suite of sensors, including an uncooled thermal imager, TV/Near Infra-Red (NIR) sensor, high-performance eyesafe laser rangefinder, digital compass and GPS.

Operational roles for SOPHIE Lite include force protection, forward observation, forward air control, covert surveillance, asset protection and homeland security. SOPHIE Lite is the latest addition to Thales's family of combat-proven SOPHIE cameras, which collectively offer the widest range of capabilities to meet any operational requirement for handheld

surveillance and targeting. Thousands of Sophie cameras are in operation with armed forces, including the British Army, and security teams around the world.

Another exhibit TACTICOS has been the world's foremost naval Mission &

XM 25 - ATK

Thales SophieLite

SOPHIE Lite is the latest addition to Thales's family of combat-proven SOPHIE cameras

Combat Management System with open standards and a massive amount of sub-systems interface implementations. Now, TACTICOS has improved even further and is matched to the needs of any Maritime Security Agency, Coast Guard or Navy. Thales designed the TACTICOS family to be the most capable Combat Management System with high performing MSO capabilities seamlessly integrated in one system.

Caracal pistols

Caracal International, the UAE-based small arms manufacturer for the civilian, military, law enforcement and sporting markets and a subsidiary of Tawazun Holding, showcased two new pistols. Tawazun was the DSEI International sponsor. The pistols were on display on the Caracal stand in the UAE Pavilion and it was for the first time they have been exhibited internationally.

Of the two new Caracal pistols, the CP663 is a double action hammer pistol designed both for use by Special Forces and for sports applications. It has a 9x19 calibre and supports an 18 round magazine. The CP664 is a strike version of the CP663, using the firing pin principle rather than a hammer. Available in either 9x19mm or 9x21mm calibre, the CP664 has a 15 round magazine. Both pistols, designed, developed and manufactured in Abu Dhabi, are available in full and compact sizes and feature a double stage trigger, rotating barrel chamber locking, horizontally and vertically adjustable rear sights, and a steel grip frame.

Nexter - Titus

Nexter introduced an all-new armored personnel carrier called Titus (Tactical Infantry Transport and Utility System). Aimed at the export market, Titus is designed as a compact, agile vehicle using commercial off-the-shelf components to reduce acquisition and operating costs.

With an empty weight of 17 metric tons and a gross weight of 27 tons, Titus is basically designed to accommodate a 10-member squad, a commander and two vehicle operators. It has a steel V-hull with large, lightweight cargo panniers attached underneath the V.

The front-engine drive-train and suspension has been designed in collaboration with Tatra. The vehicle is a 6 x 6, but operates as a 6 x 4 on the highway, and both the front and rear wheels steer. This is necessary because the second set of wheels is placed mid-length, but it also reduces the turning circle to around 12 meters.

Finmeccanica

Finmeccanica, through its companies AgustaWestland, Selex ES and OTO Melara, took part in DSEi. AgustaWestland attended DSEi 2013 exhibiting within the static display the core, state-of-the-art rotary winged platforms in service with the Royal Navy, the AW159 Lynx Wildcat and the AW101 Merlin

UAE pavilion at DSEi

Mk.2. With 62 units on order in UK in a mix for the British Army and the Royal Navy as well as with 8 naval-configured aircraft for the Republic of Korea, the multi-role AW159 is a new generation helicopter that builds on the legacy of the Lynx helicopter.

Selex ES, have been awarded a contract by Lockheed Martin UK – Ampthill for situational awareness cameras for the Demonstration phase of the British Army's Warrior vehicle upgrades

Patria's new vehicle concept

Patria launched its top notch, armoured wheeled vehicle concept at DSEi 2013. The new vehicle concept is built on experience and verified solutions based on the Patria AMV, which has been the unrivalled market leader of modern 8x8 AWVs for the last decade with nearly 1400 units contracted, selected by seven different nations and combat proven in real mission environment.

The new vehicle concept has many unique features e.g. It has a modular vehicle architecture allowing easy adaptation to various roles and providing built-in growth potential for future customer requirements. The 13 ton payload at 30 ton gross vehicle weight provides the needed payload capacity without sacrificing the off-road mobility.

Modular, adaptable protection solutions match the threats and can also be easily upgraded in the future. It is an ideal platform for weapon systems up to 120 mm including also Patria Nemo 120 mm mortar system.

Oshkosh L-ATV

Oshkosh Light Combat Tactical All-Terrain Vehicle (L-ATV) was exhibited for the first time in Europe at the DSEI.

The Oshkosh L-ATV can help fill a vital capabilities gap for protection and mobility that global militaries face with their current light-vehicle fleets. The L-ATV was specifically designed to operate on a battlefield with a wide range of threats and terrain. The platform offers unprecedented levels of protection and off-road mobility to navigate even the harshest environments.

The L-ATV's superior mobility is largely attributable to the Oshkosh TAK-4i intelligent independent suspension system. The TAK-4i system expands on the success of the proven TAK-4® system to deliver more than 50 centimeters of

independent wheel travel – a 25 per cent increase over currently fielded vehicles. The TAK-4i system enables the L-ATV to shift power to the wheels that are in contact with the ground to provide control and manoeuvrability on dangerous terrain.

Rohde & Schwarz

The highlight of Rhode & Schwarz booth was the R&S SDTR software defined tactical radio, now with an external control unit. The R&S SDTR is the first member of a new generation of software defined radios. Launched in December 2012, it has been optimized for use in vehicles and semi mobile applications. The R&S SDTR, together with the secure, network enabled, high data rate R&S HDR waveform family, is fully IP-capable and can be easily and seamlessly integrated into existing IP networks. The R&S SDTR is an open platform based on the software communications architecture (SCA) standard. Both standardized and proprietary waveforms can be ported to the radio, which enables interoperability with allied forces as required during missions. The now available external control unit provides user-friendly configuration, and can be used to control the radio even over long distances.

Diehl

Thales-owned Australian Munitions and German company Diehl have signed an agreement to co-develop an insensitive munitions variant of the Australian in-service fragmentation hand grenade. Insensitive Munitions (IM) are designed to only detonate when deployed against a target, and will not detonate as a result of mechanical shocks, fire or impact from shrapnel.

TouchLab, Cassidian

In its TouchLab, Cassidian presented some new scenarios featuring various situations and facing its customers with a display (in an interactive environment) of its unique innovative solutions that have been developed to meet the challenges of the future.

Cassidian used TouchLab interactive area to demonstrate key aspects of cyber defence against the latest wave of cyber attack exploits. These include the use of cryptographic solutions, secure exchange gateways and security operations centres.

Northrop Grumman CUTLASS UGV

Cassidian presented the Mobile IP (Internet Protocol) Node as an example of groundbreaking research that will improve the ability of military and emergency response services to communicate using voice, data and video in counter terror or post-natural disaster scenarios. The technology won the IET Innovation Award in 2012 in the Telecommunications category. During peak traffic times or in extreme weather conditions networks can become congested, restricting the flow of traffic and impeding operations. Mobile IP Node takes a holistic view of all routes from sender to audience whilst considering external conditions, message file size, priority, and security level. Mobile IP Node then selects the optimum route. Users can be confident that a message will reach its intended audience securely regardless of file size or the scenario.

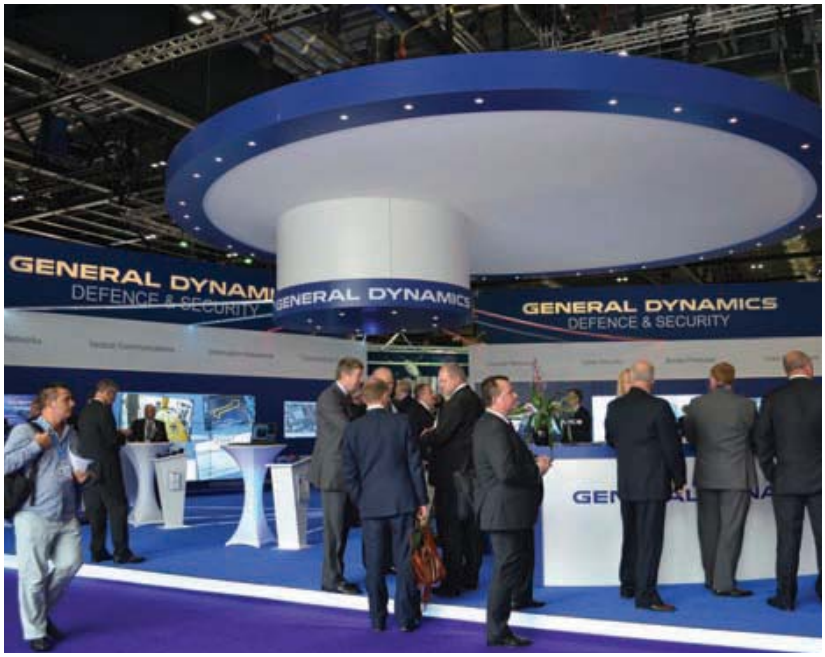
BlueNaute™ - Sagem

Sagem (Safran) showed a wide range of innovative solutions, designed to meet the most demanding requirements of air, land and naval forces in terms of intelligence, surveillance, protection, engagement, precision strikes, and asymmetrical combat.

Sagem's stand focused on several different areas: navigation, optronic systems for armored vehicles and warships, integrated warfighter systems, portable optronics, tactical drone systems, missile seekers.

Sagem's BlueNaute™ attitude and heading reference system and Epsilon land navigator is based on hemispherical resonator gyros (HRG). BlueNauteTM is a new attitude and heading reference system, intended for navigation on commercial ships. Using this same breakthrough technology, Sagem also


An impressive array of vessels visited DSEi



DSEi 2013 Major Pavilions

Europe
Pavilions: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany,

Middle East
Pavilions: Jordan and United Arab Emirates

Asia
Pavilions: India (CII), India (DEO), Japan, Malaysia, Russia and Taiwan.

North America
Pavilions: US Pavilion, US Navy League

Latin America
Pavilions: Chile and Brazil


Boeing Scan Eagle

developed the Epsilon 20 land navigator, covering navigation requirements for logistics vehicles, geographic information and satellite communications. This HRG is patented by Sagem, and offers a navigation solution combining performance and reliability in a compact package.

Sagem products have been chosen by a number of major defense programs around the world because of their outstanding performance: Rafale fighter, NH90, Caracal and Tiger helicopters, infantry soldier modernization, combat vehicles (Leclerc, VBCI, BMP2, BMP3), artillery systems (Caesar, Archer, LRM Mars), and tactical drone systems. Sagem's optronic and navigation systems are also critical components for today's navies, used on submarines (Barracuda, Scorpène, Collins, U209, etc.), aircraft carriers (Canberra class LHD for Australia and the Mistral class BPC amphibious assault ship), FREMM, Horizon and Anzac frigates (1), Baynunah corvettes and Adroit ocean patrol ships (2) are a few among the long list.

Bowman radio – General Dynamics

General Dynamics has been awarded a £45 million maintenance contract for the Armed Forces Bowman radio system by the UK MOD during DSEi. Bowman is a secure digital voice and data system which allows front line soldiers to communicate with colleagues and commanders on the ground, at sea, or in the air. It plays a vital role in Afghanistan, giving troops better awareness of any operational situation.

2015

The next edition of DSEi will be in 2015. Many of the 2013 exhibitors have already reserved space for the next event•

Russian Helicopters won the Golden Wings best debut award at the MAKS 2013

Ka-62 is the first Russian helicopter created in collaboration with international partners

The Golden Wings competition is run by the MAKS 2013 organizers to celebrate the latest developments in aviation technology as well as outstanding business and marketing efforts by MAKS 2013 participants.

Russian Helicopters this year presented a whole range of new models, including the latest medium Ka-62 and the multirole Mi-38. These helicopters are the most eagerly anticipated new models from the Russian helicopter-building industry, and were nominated as a promising new product. The award was presented to Russian Helicopters for its presentation of the Ka-62 and Mi-38.

During the MAKS 2013 Golden Wings awards ceremony, Russian Helicopters received a prize and diploma signed by Industry and Trade Minister Denis Manturov, who also chairs the MAKS 2013 Organizing Committee.

The Ka-62 is the first Russian helicopter created in close collaboration with international partners. Russian Helicopters demonstrated the prototype of the helicopter for the first time at MAKS 2013, and also signed a contract to supply five Ka-62 to Columbia's Vertical de Aviacion.

The Mi-38 is a new multirole transport and passenger helicopter. In 2012 the second prototype of the Mi-38 set five new world records, which were officially registered by the World Air Sports Federation (FAI) in March 2013. At MAKS 2013 the Mi-38 participated in flight displays and also formed part of the Russian Helicopters static display.

LCS 4 Completes Acceptance Trials

The future USS Coronado (LCS 4) successfully concluded acceptance trials after completing a series of graded in-port and underway demonstrations for the Navy's Board of Inspection and Survey (INSURV), the Navy announced.

Acceptance trials are the last significant milestone before delivery of the ship to the Navy, which is planned for later this fall. The ship completed trials Aug. 23.

During the four-day trial, the Navy conducted comprehensive tests intended to demonstrate the performance of the propulsion plant, ship handling and auxiliary systems. While underway, the ship successfully performed launch and recovery operations with both the 7-meter and 11-meter rigid hull inflatable boats, a four-hour full power run, surface and air self defense detect-to-engage exercises, and demonstrated the ship's tremendous maneuverability performing tight turns and accomplishing speeds in excess of 40 knots.

"Coronado encompasses lessons learned from the construction and operation of its predecessor USS Independence. The value of those changes was evident in the strong performance of the ship during her trial." said LCS Program Manager Capt. Tom Anderson. Milwaukee (LCS 5), Detroit (LCS 7), Little Rock (LCS 9) and Sioux City (LCS 11) are under construction at the Marinette Marine Corp. shipyard in Marinette, Wis., and Jackson (LCS 6), Montgomery (LCS 8), Gabrielle Giffords (LCS 10) and Omaha (LCS 12), are under construction at the Austal USA shipyard. The Navy is committed to a 52-ship LCS class.

Selex ES awarded a contract of about EUR 40 million for Falco UAV System

Selex ES, a Finmeccanica company, has been awarded a contract worth about EUR 40 million to deliver the Falco system to a Middle East Country. The agreement, signed during DSEi exhibition in the presence of Finmeccanica's Chairman Giovanni De Gennaro, includes operational and maintenance support activities to the customer for 12 months of the contract performance.

"Falco is an operationally proven, tactical, medium altitude, medium endurance Unmanned Aerial System for defence and security surveillance applications, said Caio Mussolini, Head of the Finmeccanica Office in Abu Dhabi, designed to supply a net-centric command and control with a tactical overview of the operational scenario and target cueing in real time".

Falco

Currently operated by a range of international customers in diverse and extreme climate and geographical conditions, the Falco system is a mature asset that can be easily integrated within existing air management infrastructures and is delivered to its customers with a comprehensive set of operational and logistic support services including pilots, sensors and mechanical operators training, advanced logistic support, battle-lab simulators.

Finmeccanica is Italy's main industrial group, leader in the high technology field, and ranks among the top ten groups at world level in the Aerospace, Defence and Security sectors.

Rheinmetall wins multi-million euro contract for mortar ammunition

Rheinmetall AG of Düsseldorf has booked a major order for mortar ammunition. A customer in the Middle East/ North Africa (MENA) region has contracted with Rheinmetall Denel Munition of South Africa to supply ammunition for a mobile 120mm mortar system. The contract, which runs for several years and will be completed in partnership with a local company in the customer land, is worth around €50 million.

Delivery of the ammunition starts in September 2014. The order encompasses tens of thousands of service, illumination and smoke/obscurant rounds. They are developed for a modern 120mm mobile mortar system, with ballistic characteristics specifically adapted to its advanced fire control unit. The ammunition's range of over 8,000 metres and proven performance in battle underpin its leading role in the market and with it, Rheinmetall's technological leadership.

Just awarded, the contract issued by the MENA-customer is the culmination of cooperation between the project participants from the world of vehicles, weapons and ammunition, and fire control technology. Moreover, the order is an important endorsement for the use of Rheinmetall ammunition in the mobile 120mm mortar system, and a significant sign of possible orders to come from other customers in the MENA region.

Rheinmetall also sees the order as a validation of its strategy of internationalization. A presence in the MENA region and entering into strategic partnerships could assist the Düsseldorf-based Group to further strengthen its reputation as a reliable partner.


120mm Mortars

NGC Awarded Navy Performance Based Logistics Contract

Northrop Grumman Corporation has received a Performance Based Logistics (PBL) contract from Naval Supply Systems Command Weapon Systems Support, to continue its 24/7 support of the U.S. Navy fleet for three shipboard systems.

Under the not-to-exceed $24.8 million one-year contract, Northrop Grumman will provide 150 PBL repair assembly kits and spare parts for the WSN-7 ring laser gyro, the AN/BPS-15/16 submarine radar detecting and range set, and the DDG steering and scalable integrated bridge systems for guided missile destroyers. The systems are used on U.S. Navy surface ships and submarines and on foreign military sales surface ships. The work began in July 2013 and will continue through July 2014. The award is a continuation of work Northrop Grumman has performed for the fleet for the past nine years.

"Northrop Grumman's partnership with the Naval Supply Systems Command has been a win-win for both organizations since 2004," said Bill Hannon, vice president of Northrop Grumman's Maritime Systems business unit. "This material arrangement allows the Navy to affordably and promptly support these major shipboard systems and minimize down time while continuing to conduct critical maritime operations."

Assembly kits are produced and delivered worldwide to operating forces as quickly as possible with minimal downtime, taking into consideration each vessel's deployment schedule, current operational needs and expected plans.

HÜRKUŞ" Realizes Maiden Flight

Turkish Basic Trainer Aircraft "HÜRKUŞ", which was designed and manufactured by TAI, to meet the training and Light Attack/Armed Reconnaissance aircraft requirements of Armed Forces, successfully realized its maiden flight on August 29, 2013 at TAI's premises in Ankara, Kazan.

HÜRKUŞ Flight Test process kicked off with the permission of the Directorate General of Civil Aviation. The flight test period will be completed with the Type Certificate* which will be issued after completion of the test both by DGCA and EASA.

During the flight, HÜRKUŞ climbed 9500 ft and completed with the controlof flight surfaces. HÜRKUŞ has successfully landed after a 33-minute test flight.

TAI's test pilot Murat Özpala, who realized the maiden flight, said that the platform controllability was well as foreseen. He also said: "I felt the power of the aircraft with the high take-off performance with its 1600 hp engine."

As an aviation tradition, Exe. V.P. of Aircraft Group Mr. Özcan Ertem, HÜRKUŞ Chief Engineer Ms. Aylin Ararat and Test Pilot Mr. Murat Özpala were flushed with water to celebrate the successful flight.

Thuraya unveils new SatSleeve

Thuraya Telecommunications Company, a leading Mobile Satellite Services (MSS) operator, launched a new edition of the Thuraya SatSleeve, the world's first and only satellite adaptor for the iPhone®. The new release not only allows users to make phone calls and to send SMS messages via Thuraya's satellite network, it also enables them access to emails, as well as popular social media and instant messaging apps such as Facebook, LinkedIn, Twitter and WhatsApp among others. Thuraya SatSleeve users can now post news updates, chat via messaging apps with their contacts as well as send and receive email from the most remote locations in satellite mode. The device can be used across Thuraya's extensive satellite network with coverage in over 140 countries.

Samer Halawi, Chief Executive Officer of Thuraya, said: "The new release of the SatSleeve, which now includes data, underscores our commitment towards delivering new and innovative mobile satellite products. Users today are increasingly relying on their smartphones to stay connected and we strongly believe in listening to them and to their requirements as we develop new mobile satellite products that align with their needs."

Thuraya SatSleeve enables users to enjoy ubiquitous coverage even in the most remote environments that are not served or that are under-served by terrestrial networks. The SatSleeve customers include corporate users, enterprises from all industries, explorers, mountaineers and other outdoor enthusiasts. The SatSleeve can be used across the Thuraya network either with a Thuraya SIM card or with a standard GSM SIM card available from 356 worldwide GSM operators across more than 160 countries. This makes the Thuraya SatSleeve highly flexible with the ability to be suited to the users' individual needs.

Sagem and Kamov team up on Ka-52 Alligator attack helicopter

Sagem (Safran) and Kamov (Russian Helicopters) have combined their complementary areas of technological and industrial expertise to develop an enhanced version of the Kamov-52 Alligator attack helicopter, which will address a requirement expressed by several countries.

Sagem and Kamov started working together in 2011, with the aim of offering upgrade solutions, including integration, for Kamov helicopters, in particular Sagem optronic equipment and LINS 100 inertial navigation systems. The two companies plan to start integration of a new optronic system in early 2014.

Ka-52 Alligator attack helicopter

The companies' joint offering for helicopters will support Sagem's strategic objective of establishing long-term industrial partnerships with leading Russian companies.

In this cooperation Sagem will bring its experience gained from the Strix optronic sight system, which is already in production for the French-German Tiger combat helicopter. Providing full day/night capability, it has already contributed to the success of military operations by French armed forces in several theaters, including Operation Serval in Mali earlier this year.

Cobham wins US Army Contract Worth up to $7.1M

Cobham has been awarded a contract by the US Army worth up to $7.1 million to overhaul and upgrade Nitrogen Inerting Units (NIUs) for the AH-64 Apache helicopter.

In September 2012, Cobham received a five year Indefinite Delivery, Indefinite Quantity (IDIQ) contract valued at some $15 million to manufacture OBIGGS NIUs for US Army AH-64 Apache helicopters. The OBIGGS fulfils a critical aircraft safety system role by displacing fuel tank vapors with inert nitrogen gas, reducing the risk of explosion. More than 1,500 Apache helicopters with Cobham NIUs have been delivered worldwide.

Cobham Life Support president Kelly Coffield said: "This award reflects Cobham's unrivalled decades of experience in the design, development, delivery and support of fuel tank inerting systems, ranging from depot repair to equipping and training customers to fully maintaining products at their own facilities."

Cobham remains the worldwide leader in military OBIGGS providing solutions since 1985 on more than 2,400 aircraft flying today, ranging from military helicopters, military transport aircraft like the C-17 Globe Master, to regional and commercial platforms such as Boeing 787 Dreamliner. Cobham OBIGGS systems have logged more than six million flight hours total experience including 12 international customers. Cobham can tailor the modular range of proven OBIGGS to fit a wide range of applications.

Raytheon Awarded DTRA Border Security Contract

Raytheon Company was awarded a Defense Threat Reduction Agency (DTRA) maritime border security contract for the Philippines. Valued at up to $18 million if all options are exercised, this is Raytheon's first border security-related contract in Southeast Asia.

Under the two-year base contract, Raytheon will design and construct a National Coast Watch Center (NCWC); support integration of data from various agencies into the NCWC; and provide acquisition, installation and training on an automatic identification system as well as radio communications for the Government of the Philippines. The contract was awarded July 2013, and will end July 31, 2015.

"The Philippines contract extends Raytheon's border security solutions portfolio to Southeast Asia and confirms that our integration solutions, program management leadership and international expertise are valuable as we expand our support of customers around the world," said David Appel, director of Surveillance, Range, and Infrastructure Solutions for Raytheon's Intelligence, Information and Services business.

"Dubai Airshow is the fastest growing airshow in the world"

Sharief Fahmy, CEO, Dubai Airshow

By: Jasem Shaheen

The 13th edition of the Dubai Airshow, slated to be the biggest so far, will be held at its new venue, the Dubai World Central, during 17-21 November. The airshow has seen continuing growth with a record 60,000 visitors and over 1,000 exhibitors expected this year. Lt. Col. Sharief Fahmy, who recently joined the Dubai Airshow as the Chief Operating Officer, talks to Nation Shield on the new features at the show and the challenges the relocation to the more exciting venue provided.

Lt. Col. Sharief Fahmy

You are joining the Dubai Airshow after completing a distinguished 23-year career in the US Air Force (USAIF). How do you view the new assignment?

It has been a very smooth transition for me since I joined in June. As a former customer of Fairs & Exhibitions during both Dubai Airshow 2009 and 2011, I have experienced first-hand the quality that F&E Aerospace has to offer. The Dubai Airshow has an amazing history and tradition of excellence -I am truly honored to join the team at such an exciting time.

Most recently you served for five years at the US Embassy in Abu Dhabi as an international regional area strategist when you led the US government to their successful participation in the last two Dubai Airshows and last three editions IDEX. Can you comment on that experience and the challenges it offered?

The 23 years of public service at the US Embassy diplomatic mission, is truly one of the greatest honors of my professional career. I am truly humbled by the experience in my tenure and look forward to building on them in my new role as CEO of F&E Aerospace. In many ways the Airshow is home to the Aerospace community and I see my new position as an extension to my former career and look forward to serving the aviation community.

Dubai Airshow 2011 saw a total order book of $ 63.3 billion and total trade visitors of 56,548 up by 7 per cent from the previous edition. With organization getting bigger and better, to what extent are these likely to go up?

As witnessed over the past 26 years, the Dubai Airshow is rated as the fastest growing airshow in the world and as rightly mentioned, the last show totaled $63.3 billion in orders and we expect to see a healthy level of deals made at the show. Moreover the Dubai Airshow prides itself on providing the ideal platform and opportunity for the aerospace industry to meet and connect with all the right people in one location. If you want to do business in the Middle East and specifically the Aviation industry, this show held once every two years, is an event not to be missed. Visitor registration is now open to at www.dubaiairshow.aero/register

We are preparing for the 13th edition of the Dubai Airshow to be the biggest yet and given our new location we expect to see continuing growth with expected numbers of up to 60,000 attendees and over 1,000 exhibitors - making the move to the new venue particularly well timed as we have more than double the amount of space compared to our previous site.

The major challenge for you this time and a big surprise for visitors to the Dubai Airshow 2013 is the shifting of show to Dubai World Central (DWC) Jebel Ali. Apart from the sheer growth of the show, what were the other reasons for the relocation?

We simply outgrew the old venue at Airport Expo and it is no longer available with the extension of the A380 terminal and the fact Dubai International Airport is now one of the world's busiest airports. However Dubai recognizes the importance of hosting events like the Dubai Airshow and has invested in a wonderful new venue for the show.

We are also supporting Dubai's bid to host the Expo and if Dubai is successful, our new Airshow venue is situated near the Dubai World Central. So it is exciting for us and all of Dubai, as Expo 2020 will benefit both the city and the Dubai Airshow as it would mean expanding the city even further with retail, commercial and hospitality opportunities. It will become a city inside a city.

The shifting of the same permanent structures formerly located at Dubai International Airport (DXB) to DWC was another challenge. How have you managed to keep it on schedule?

The relocation plan has been in motion for the past five years. We have had the support from Dubai Aviation Engineering Projects (DAEP) and our shareholders in executing the move.

We have all worked very closely together on the design and construction of the purpose built venue – teamwork, collaboration and a two way relationship has led to what we are calling the 'ideal venue' as it includes larger freight access, the land side is in a better location and one large exhibition hall rather than the three separate halls we had at the last venue.

Dubai Airshow provides the ideal platform and opportunity for the aerospace industry

In terms of the floor area and number of halls etc, what are the major upgrades at the November 2013 Airshow?

The exhibition space and footprint will now total 645,000 sqm in size, making it more than double the size of the old site at Airport Expo. The purpose built show site will offer a larger static park with fewer flying restrictions, improved media and catering facilities and also three times more parking spaces than at the previous site.

Though Dubai Airshow is truly international, how would you describe the participation from other GCC countries as well as countries from South Asia?

The largest participation at the Airshow comes from the UAE. Back in 1989 we had just 20 UAE exhibitors but the 2011 event saw 200 UAE companies. People from the UAE are also our largest visitor audience. Fifty countries exhibited at last year's airshow and the other large participations came from the USA, UK, France and Germany. Visitors came from 136 countries and the second largest visitor audience was from Saudi Arabia, followed by Europe, Asia and the Americas.

The Futures Day launched in 2011 is to be bigger this year. Can you elaborate?

The Futures Day initiative was introduced at the last show and following the success of 2011 we have seen an overwhelming response from colleges, universities, academies and cadets and we are expecting to hold a truly interactive day catering to all facets of the aviation industry and most importantly reflecting on the quality of students who will be in attendance and ultimately the leaders in tomorrow's Aerospace industry.

What are the new features as the Dubai Airshow goes green this year with a dedicated area at the show?

The venue itself has been built in an environmentally friendly way where possible as some of the exhibitions structure (formerly located at Airport Expo) were deconstructed, moved and reconstructed including the chalets, majlises and even the surrounding trees. As show organizers we have set our efforts on supporting this green initiative at the show itself and this will be seen through out the venue, with recycling areas and where possible using paperless tickets. The media onsite will also be involved in this new initiative as all exhibitors will have the chance to upload their media materials to a digital press box thereby reducing the amount of paper used.

Last edition saw the debut of the Boeing 787 Dreamliner in the Middle East and international debut of the Al Fursan Aerobatic team from the UAE, flying Aermacchis. What new can we expect this time?

As a team we are excited about the endless possibilities of aircraft to be displayed and in the aerial display - we will be announcing the aircraft being displayed in October when we have confirmations; the list will be published online at www.dubaiairshow.aero. I am pleased to announce, the UAE's very own Aerobatic team the Al Fursan will be making a return in November.

Any other comment you would like to make?

The Dubai Airshow continues to be the region's leading aerospace event. In addition to the features seen in previous years, this year we aim to highlight how aviation helps to provide humanitarian relief during a crisis. The Dubai Airshow is bringing the UN World Food Program (WFP) and Care by Air together in a new humanitarian pavilion which in turn will showcase more than 15 charitable organizations, air operators and supporters in order to encourage more key players to join in, raise awareness and garner support for their crucial work.

This year's Dubai Airshow will also see the return of the Middle East's dedicated training event for the aviation industry the Gulf Aviation Training Event (GATE), taking place on 18-19 November and Futures Day will also return on 21 November - the final day of the show. For the first time, we will be launching a separate public area called Skyview at the Dubai Airshow enabling a family safe area to watch one of the world's best flying displays right from the runway, taking place 18-21 November, between 12pm and 6pm.

We believe this year's show will truly cater for everyone, even more so than in previous years, and we look forward to welcoming all our guests to our new home in Dubai World Central, on 17-21 November•

"Cyber attacks targeting critical infrastructure

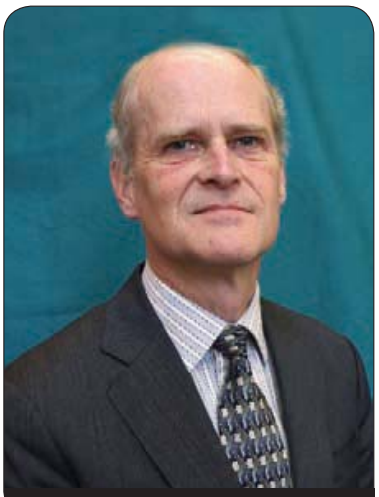
ICCCF 2013 examined the risks and operation of mobile systems

By: Sakha Pramod

At a time when digital technology is integrating the world, cyber crimes are posing a major threat to financial and banking services as well as critical infrastructure. Nation Shield talked to Dr Russell G Smith, Principal Criminologist, Australian Institute of Criminology about the emerging challenges in the cyber world and how the International Conference on CyberCrime and Computer Forensic (ICCCF) 2013 would be addressing those issues. Excerpts:

Digital technology is integrating the world. But digital crimes are posing a major threat to security and economy of nations threatening the concept of integration itself. How do we meet this challenge?

Technology certainly is becoming all-pervasive throughout the world and in terms of integration, developments in electronic payment systems in banking and finance are really the area in which there is the greatest degree of integration. For example, the International Conference on CyberCrime and Computer Forensic examined the risks and operation of mobile payment systems.



Dr Russell G Smith, Principal Criminologist, Australian Institute of Criminology

pose a major threat" : Dr Russell G Smith

These are the areas in which global standards apply so that people have to use the same systems across the globe. On the other hand, criminals are also aware of this and if they can compromise those global systems, they can do it once only without the need to adapt their cyber crime topology for each individual country. Just one compromise will be suitable to work right across all countries. An example concerns remote skimming of data on plastic payment cards used in ATMs and payment terminals. Although integration is good when rolling-out new technologies and making them adaptable in all countries, the risk is that if they are compromised this can occur across many nations.

Technology-related crime is an ever growing problem with increased application of mobile technology. How has mobile technology contributed to the threat?

With mobile systems, and also wireless systems, the concern is that the same level of attention to security has not really been placed on them as was developed for other segments of the market. Initially people did not use PINs on mobile devices at all. They are starting to now. There is much greater security awareness but the same level of protection has not really been present for mobile devices. I think that is partly because mobile technology was taken up by young people who would like to carry out transactions quickly and easily and not have any barriers to their use of devices like having to use PINs and other forms of identification. Young people like to get instant responses and so the industry has tried to make systems that are simple, quick and easy to use but perhaps not as secure as they should be. So I think that is an area of concern. The other related issue in the mobile and wireless area is the development of contactless cards that was introduced, again, as a simple way for people to transact business without having to use a PIN. Initially, very low credit limits applied, but now these limits have

Technology-related crime is an ever growing problem with increased application of mobile technology

gone up for such transactions. I think we need to be careful about allowing these very open technologies to be used without adequate security measures in place.

The other area of concern regarding mobile technology and cyber crime is the problem of child exploitation and also the content that is used on mobile devices. We have problems right round the world of young children taking nude photos of themselves and police then charging them with indecency offences. I think there is a need to raise awareness among young people who use mobile phones of the need to use them securely and carefully. The police have also in some countries decided not to prosecute young children for such offences. But there is still a possibility that the photos they take will then be put on internet and shared among child exploitation offenders and others. Once an image is put on the net, it is very difficult to undo the damage and have the image removed.

What are the core areas that the International Conference on CyberCrime and Computer Forensic 2013 would be looking at?

The area of verification of identity is very important. I think that is something that governments are trying to look at but there needs to be more attention given to this. It might be appropriate to hold a whole conference on identity crime or identity misuse because misuse of identity is not just an issue for commercial transactions but it is involved in a lot of organized criminal activity, terrorism offences, cyber-stalking and cybercrime where people pretend to be somebody else for the purposes of offending.

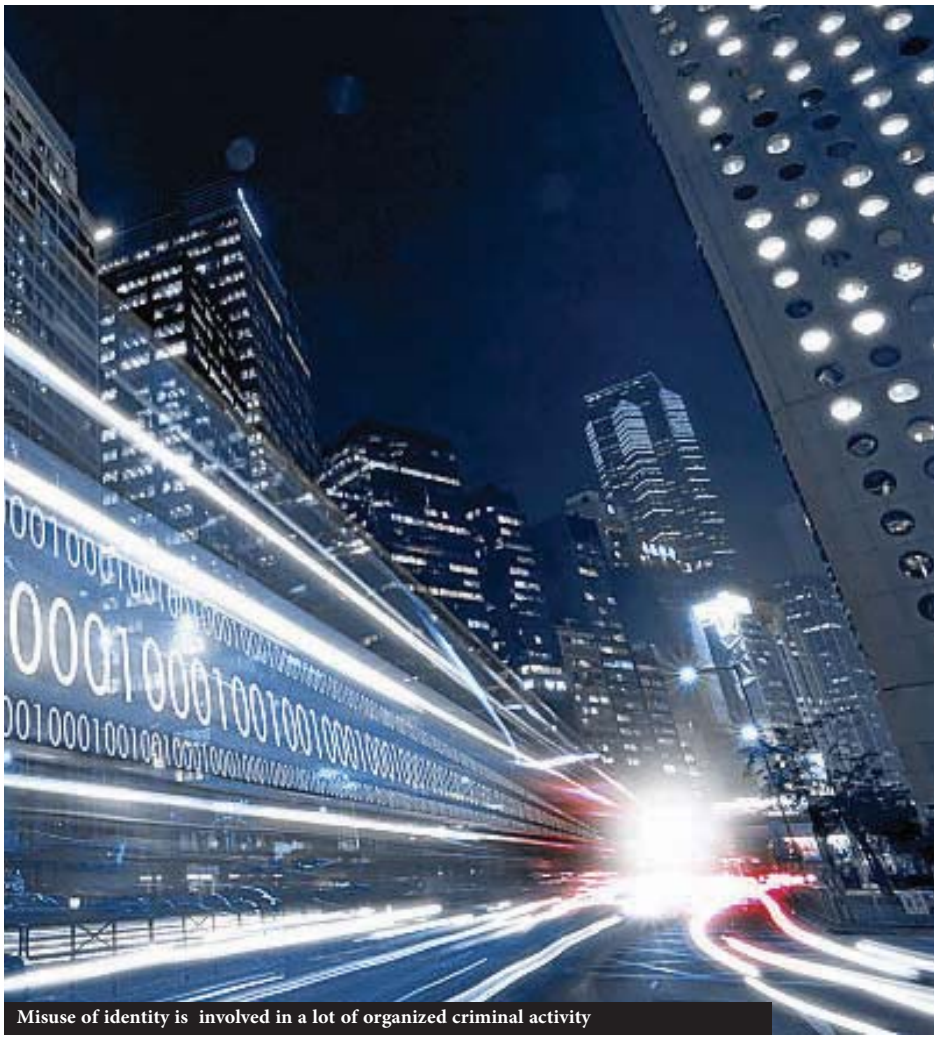
Costs of cyber crime are estimated to run into USD100 billion a year worldwide. Which are the main areas hit by cyber crimes in terms of economic costs?

First, I would say it is very difficult to do research on the cost of cyber crimes. There is a report on E-Crime just released in the United Kingdom by the House of Commons Home Affairs Committee that considered the problem of trying to put a cost estimate on cyber crime in Britain.The Committee referred to a previous estimate of £27 billion as the cost of cybercrime in Britain, but noted that this had been criticised. The trouble is computers are so prevalent in society now that any activity could potentially be defined as a cyber crime. Misuse of a locking device to get into and steal somebody's car is technically a cyber crime because it is using a computer chip to commit the

Oxygen Forensic Suite 2013 is a mobile forensic software that goes beyond standard logical analysis of cell phones, smartphones and tablets

offence. But would you include all car thefts within the cost of cyber crime? To estimate cyber crime costs, you really need to define what kind of cyber crime you are looking at. If it is just financial transactions you can probably calculate that quite precisely. But in all those other computer-enabled crimes perhaps you should not really include ordinary crimes simply committed using a computer. For instance, use of mobile phones and computers by criminals is technically a cyber crime. But if one uses computers to plan a robbery, you cannot put a cost on that. So I think definition of cyber crime is important before you attempt to quantify the cost of the problem.

What is happening is that governments and also businesses want to have a figure put on the cost of cyber crime so that they can then go to treasury departments and argue for a need to increase their budgets for computer security. Arguably, the main area in which cybercrime is costing money is in connection with financial transactions. Throughout the world there are billions of dollars being lost to personal scams. If you look at cyber crime costs, you must also consider how much it costs in terms of expenditure on security and prevention.



Misuse of identity is involved in a lot of organized criminal activity

How critical is the issue of cyber security in Australia and how do you cope?

The government has taken a keen interest in cyber security in Australia with a recently-released national policy trying to provide the framework for how the government is going to respond to cyber security threats. Some of the ideas have been to increase training, particularly for law enforcement, and so there is going to be a new training center established in Australia to train investigators in computer forensics and also to educate the community on how to protect themselves and also to train the business community to protect themselves against cybercrimes. There are some other initiatives dealing with security in government ensuring that new electronic payment systems, electronic taxation etc. are all as secure as possible. The other area relates to consumer fraud and consumer scams which have attracted attention from government agencies in recent years. A National Cloud Computing Strategy has also been released and the government has done a lot of work to try to identify the risks that cloud computing will hold for businesses and for government departments using that technology.

How important do you think is exchange of ideas to reduce costs of cyber crimes?

It is very important for any new security measures to be as widely used as possible, particularly in financial services and banking. New security risks when discovered should be shared by banks because they all face exactly the same issue. Sharing information in the private sector is important and it is critical

TEOPAD is a security solution for professional applications on smartphones

to bring in the law enforcement agencies as well. Law enforcement agencies around the world and those involved in intelligence gathering also share information. The difficulty with that is often that they have their own systems in place and it is physically impossible for other government agencies to gain access to them. So the solution to that is to have some cooperative agreements with the law enforcement agencies in different countries. However, they are often slow to develop formal cooperative arrangements and it is hard to get information quickly. In the world of cybercrime, you need to have real-time access to data and solutions.

Cyber crimes are a new phenomenon and many countries are not equipped to cope with them. Don't you think the advanced countries should take the lead in this area to the benefit of all?

Developed countries certainly have got the money to devise effective solutions. They should make some of those solutions available to developing countries either free of charge or at minimal cost. Particularly in the Asia-Pacific region there's lot of cybercrime. In the case of the anti-money laundering regime where compliance strategies are extremely expensive, even for large banks in western countries to implement. For small Pacific nations to try to implement such strategies is impossible. In that area, though, there is a lot of sharing of technology and information between larger and smaller nations.

Cyber threats can, admittedly, compromise not only financial institutions but high security entities like nuclear plants. How prepared are we to deal with these security issues?

Some of the cyber attacks have focused on the financial services industry. They could, just as well, be focused on critical infrastructure, not just nuclear, but also petroleum and water supplies, telecommunications and I think electricity is a key area of risk. One of the most effective cyber-attacks or cyber-terrorist attacks could be to compromise electricity supplies to a large city. Most nuclear plants operate with electricity and if that is disrupted that can have serious consequences. There have been minor instances of attacks on critical infrastructure reported in the past. There was one case in Queensland Australia in 2000 in which a man hacked into a local Council's computerized waste management system following the loss of his job at the plant. To sabotage the system he set the software on his laptop to identify itself as one of the pumping stations and then suppressed all the alarms. During the attack he had command of 300 supervisory control and data acquisition nodes governing sewage and drinking water. He caused millions of litres of raw sewage to spill into local rivers and parks killing marine life and causing offensive smells. This sort of thing can happen and if done on a large scale, could create serious problems.

Cyber threat has no frontiers as it can come from any part of the world. Does that pose a new challenge as we may be able to make good the damage but we cannot bring the perpetrators to book?

There are more and more cyber-crimes taking place across the borders. They usually involve criminals in one country who are working with individuals who may be in two or three other countries and they use systems that are routed through other different locations. So the problem for law enforcement is that they have to deal with

many different jurisdictions involved in one activity and that creates enormous difficulties in obtaining information and also in finding out where the offence took place. For the purposes of international law and extradition, it is necessary to determine where the offenders and victims are located or where the major impact of the offence took place. I don't think criminals are going to stop cross-border activity. In fact they are likely to plan their activity more carefully in future. There is this possibility of "jurisdiction shopping" where criminals choose a country as a base which has the least effective cyber-crime laws with thelowest penalties. This will take place much more in future because if offenders are prosecuted they may avoid any penalty or receive a relatively low penalty. We have seen that in the past. There was a case several years ago in which the offender was based in a country where there were no cyber-crime laws in place and he could not be prosecuted. Related to that is the cloud computing problem where data are stored overseas and law enforcement have enormous difficulties in gaining access to it for the purposes of investigations.

Do we have international bodies to forge a united front against cyber crimes?

There has been a vast degree of improvement in that area. The United Nations Office on Drugs and crime, based in Vienna, is doing a lot of work on cyber-crime at the moment. They are trying to develop uniform approaches to improving education and training. But there is lot more work that needs to be done. Many international bodies now deal with the law enforcement aspects of cybercrime. In Europe we have Europol, Eurojust, Eurostat for crime statistics and they are all working in their own way on cyber-crime issues. The European Convention on Cybercrime is another important development and a number of countries that are not within the EU have ratified the Convention. This Convention is a major attempt to try to have uniform laws and procedures to deal with cyber-crime. There are other important initiatives that we have to continue to develop. In the area of finance and banking there is probably more international cooperation than in other areas. Particularly the anti-money laundering regime is now implemented widely across the globe. The Wolfsberg Group, for example, is an association of twelve global banks that aims to develop financial services industry standards and related products in connection with anti-money laundering and counter-terrorism financing. There is, however, a lot more to be done.

Criminals choose a country as a base which has the least effective cyber-crime laws

Does the international legal system suffer from any lacunae in dealing with cyber crimes?

The risk is that some of the less-developed countries might not have the resources to adopt what the other countries are recommending they should use to control cybercrime. It is all very well to have a wealthy set of countries set up rules and regulations on the best way to respond to crime but if they have to be implemented in a country that have a hundredth of their budget, it might not be possible to implement such systems. So there needs to be a lot of flexibility in the sort of regimes that are put in place to make them suitable for all sizes and categories of country•

Boeing Fulfills US Air Force C-17 Production Contract

Employees continue to build airlifter for global customers

Boeing delivered the 223rd and last U.S. Air Force C-17 Globemaster III airlifter, fulfilling the production contract more than 20 years after the first delivery.

The Air Force was the C-17's launch customer. Since the aircraft's first flight Sept. 15, 1991, it has been the world's strategic airlifter with tactical capabilities that allow it to fly between continents, land on short, austere runways, and airdrop supplies precisely where they are needed.

"Thank you for delivering to our nation combat airlift – that is the definition of the C-17 – the most versatile, most capable, most ready airlifter ever built," said U.S. Air Force Gen. Paul Selva, commander, Air Mobility Command. "What you have done with this aircraft speaks volumes about your character."

Boeing continues to produce C-17s for other customers around the world, and maintain and sustain the aircraft through the C-17 Globemaster Integrated Sustainment Program.

C-17s have been involved in contingency operations of all types, including flying troops and equipment to Operation Enduring Freedom in Afghanistan and to Operation Iraqi Freedom. The airlifter also has been used in humanitarian missions around the world, including the Japanese and Indian Ocean tsunamis of 2011 and 2004, respectively; Hurricane Katrina in 2005; and the Haitian earthquake of 2010.

"C-17s are the workhorse for the U.S. Air Force in wartime and in peace," said Chris Chadwick, Boeing Military Aircraft president. "So while this is the last new C-17 to be added to the Air Force fleet, the mission does not stop here. The C-17 delivers hope and saves lives, and with the Air Force in the pilot's seat, it will continue to do so well into the future."

The C-17 holds 33 world records – more than any other airlifter in history – including payload-to-altitude, time-to-climb and short-takeoff-and-landing marks. It has exceeded 2.6 million flight hours, playing anintegralroleinglobalstrategicairlift.

The National Aeronautics Association in 1994 awarded the C-17 its Collier Trophy, recognizing the aircraft as the top aeronautical achievement of that year.

"C-17 is the product of our dedicated workforce and more than 20 years of teamwork with our suppliers and the U.S. Air Force," said Nan Bouchard, Boeing vice president and C-17 program manager. "Every employee here is proud to build this amazing aircraft. We are continuing the legacy by building C-17s for our partner nations, and we will continue to work with the U.S. Air Force to ensure their aircraft deliver top performance into the future."

In addition to the 223 C-17s delivered to the U.S. Air Force, 34 are operated by Australia, Canada, India, Qatar, the United Arab Emirates, the United Kingdom and the 12-member Strategic Airlift Capability initiative of NATO and Partnership for Peace nations•

Cassidian's advanced identification systems provide combat aircraft with new capability

Reverse IFF enables sophisticated early detection of friendly forces

Cassidian, the defence division of EADS, has implemented a new capability of battlefield identification which allows combat aircraft and helicopters to reliably identify friendly forces in a pre-defined area before the use of weapons and thus avoiding Casualties from friendly fire.

As reported by the company during the DSEI exhibition, Cassidian has successfully tested the enhancement of equipment used in military missions to distinguish friendly forces from hostile, the so-called Identification Friend-or-Foe (IFF). This enhancement, called Reverse IFF (RIFF), allows aircraft to locate friendly forces in a pre-defined ground area by emitting interrogation signals. Previously, aircraft only responded to enquiries sent from ground-based interrogators but had no technical means themselves to identify ground forces.

"Our Reverse IFF solution is based on the latest NATO IFF standard, Mode 5, which cannot be intercepted by hostile forces due to our sophisticated encryption techniques linked to it," said Elmar Compans, Head of Cassidian Sensors & Electronic Warfare.

Mode 5 RIFF enables aircraft and helicopters to use Cassidian transponders for air-ground interrogations in addition to their current function responding to interrogations from ground stations. This way, airborne platforms receive a valuable new capability without substantial modifications in aircraft equipment.

Cassidian has tested the new capability in several campaigns, the most recent conducted at the end of August on the German test area of Baumholder. Prior to that, the company supported the German forces in the Bold Quest 2013 exercise held mainly in North Carolina/USA, with equipment from the whole IFF action chain: MSSR 2000 I (MSSR - Monopulse Secondary Surveillance Radar) interrogators deployed in ground stations; LTR 400 (LTR - Lightweight Transponder) transponders employed in a German Luftwaffe C160 "Transall" mission aircraft and the latest QRTK 3/4NG cryptographic computers. Complete interoperability with in-service allied IFF Mode 4 and 5 equipment was proven. This successfully demonstrated the proper employment of the next-generation IFF standard Mode 5, which is to be introduced in NATO forces from 2014.

IFF procedures are employed in military missions according to standardised question-and-answer signals in order to quickly recognise friendly incoming aircraft, and to support the decision whether to engage the aircraft or not. Different from hitherto utilised systems, Cassidian's IFF products employ highly sophisticated encryption techniques to avoid hostile signal manipulation.

Cassidian has delivered IFF systems to several NATO nations for ground, naval and air applications. Amongst others, the long range interrogator MSSR 2000 I protects all German Navy ships as well as UK Royal Navy ships and the French Navy's BPC command ships. It is also employed in all long range air defence radars of Germany and the UK. In Germany, Cassidian has established the air traffic control network of the German Luftwaffe covering an airspace of 1,700 x 1,500 km. In total, Cassidian has more than 370 systems in approx. 30 nations under contract, including the United States•

L-3 WESCAM Selected to Provide MX™-15 Imaging Turrets

Imaging systems are for the Royal Danish Air Force's EH101® aircraft

L-3 WESCAM announced that it has received an acquisition and sustainment contract from the Danish Defence Acquisition and Logistics Organization (DALO) to provide a minimum of eight MX™-15 electro-optical and infrared (EO/IR) imaging systems for the Royal Danish Air Force's (RDAF) EH101® aircraft. System deliveries are expected to be complete by 2014.

Installation of the turrets will be done by DALO, while certification and configuration management will be provided by AgustaWestland. The newly equipped EH101s will then be deployed to the RDAF's 722 Squadron in support of RDAF Tactical Troop Transport (TTT) operations, training exercises within Denmark and possible future use in mission theatres globally.

Maintenance of the MX-15 systems will be performed by DALO at its existing maintenance facility in Frederikshavn, Denmark.

"This order pairs the most modern TTT helicopter with an advanced EO/IR sensor suite that provides crucial day/night imaging capabilities for a broad range of missions," said Paul Jennison, vice president of government sales and business development for L-3 WESCAM. "We are proud to be selected as a contributor to this important fleet enhancement program and are looking forward to a long and successful partnership with the RDAF, DALO and AgustaWestland."

The MX-15 system has been engineered as a single line replacement unit solution, which reduces installation weight by 25 percent and increases much-needed cabin space for transporting equipment, evacuees and

personnel.

The MX-15's all-digital, high-definition EO and IR cameras will provide increased visual range and wider fields-of-view than traditional standard-definition cameras. In addition, the systems will be configured with a zoom TV, high-magnification spotter TV, two laser sensors and MX-GEO Gen. 3 – a package that includes GEO-Scan, GEO-Tracking and Adaptive-GEO technologies. Together, this software suite helps deliver maximum geographic location accuracy and significantly reduces operator workload in demanding and stressful operations.

L-3 WESCAM is a world leader in the design and manufacture of stabilized, multi-spectral imaging systems. L-3 employs approximately 51,000 people worldwide and is a prime

contractor in C3ISR (Command, Control, Communications, Intelligence, Surveillance and

Reconnaissance) systems, platform and logistics solutions, and national security solutions. L-3 is also a leading provider of a broad range of electronic systems used on military and commercial platforms.


Royal Danish Airforce EH101

ELIMINATE HESITATION

L-3's MX™-Series Provides Clarity and Removes Uncertainty.

- High-Definition EO/IR – Examine all digital, full-motion video Intel in 1080p resolution
- High-Magnification, Large-Aperture Optics – Experience superior range performance
- Image Blending – Uncover more detail by blending EO and IR images into one image stream
- MX-GEO – Accurately steer, point and track to targets with minimal operator involvement

To learn more, visit www.wescam.com.

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Northrop Grumman Delivers PMS for Astute

PMS controls and monitors platform machinery and onboard systems

Royal Navy's Astute-class series' boat 5 submarine

Northrop Grumman Corporation has supplied the final batch of Platform Management System (PMS) hardware for the Royal Navy's Astute-class series' boat 5 submarine.

Under a performance partnering arrangement, Northrop Grumman's Sperry Marine business unit supplied the PMS to BAE Systems Maritime–Submarines for installation on Astute Boat 5, Anson, at its shipyard in Barrow-in-Furness, U.K. The PMS equipment controls and monitors the submarine's platform machinery and onboard systems.

"Northrop Grumman has a well established relationship with the Royal Navy, supplying and supporting systems for surface ships and submarines," said Andrew Tyler, chief executive U.K. and Europe, Northrop Grumman. "The continued success of our involvement in the Astute programme is a reflection of the skill of our teams and the close partnership that we have with BAE Systems and the Ministry of Defence."

Additionally, Northrop Grumman is currently under contract to supply PMS hardware and software for Astute Boat 4 (Audacious) and the forthcoming Astute boats 6 and 7, which will be the Royal Navy's newest nuclear-powered submarines.

The System will provide an advanced network design that includes the stringent levels of safety and redundancy associated with nuclear submarine control systems

"Our extensive track record of delivering reliable, high-performance navigation and ship control solutions has helped to establish us as a preferred supplier for Royal Navy platforms," said Alan Dix, managing director of Northrop Grumman Sperry Marine. "We are particularly pleased that we have achieved 100 percent on-time delivery status during the two-year process for Astute Boat 5."

Based on Northrop Grumman Sperry Marine's innovative approach to configuring commercial off-the-shelf hardware and software to meet exacting military and commercial applications, the PMS is expected to reduce life cycle costs and minimize program risk for the U.K. Ministry of Defence. The system will provide an advanced network design that includes the stringent levels of safety and redundancy associated with nuclear submarine control systems.

Also, the Platform Management System is expandable and versatile due to an open architecture design that allows interfacing with third-party equipment via standard field-bus technology.

Northrop Grumman Sperry Marine in the U.K. has a long and successful relationship with the Royal Navy, supplying and supporting machinery control systems, navigation radars, gyrocompasses and other navigation equipment for additional submarines and surface ships, including the Type 45 destroyer.

Sperry Marine is a business unit of Northrop Grumman's Navigation and Maritime Systems Division. Headquartered in New Malden, U.K., with major engineering and support offices both in New Malden and in Hamburg, Germany, Northrop Grumman Sperry Marine provides smart navigation and ship control solutions for the international marine industry with customer service and support in numerous locations worldwide.

Gulf Naval Commanders Conference

November 6, 2013, Abu Dhabi, United Arab Emirates

مؤتمر قادة القوات البحرية لدول الخليج
GULF NAVAL COMMANDERS CONFERENCE

Under the esteemed patronage of the UAE Naval Forces, INEGMA will be organizing one of the most unique and distinctive navy conferences this year under the title of the Gulf Naval Commanders Conference (GNCC); the conference will take place on November 6, 2013 at the Armed Forces Officers Club (AFOC) in Abu Dhabi, United Arab Emirates.

GNCC will bring together Naval Commanders from the region and further afield to take part in a one-day dialogue between partners operating in the Gulf region. The combination of senior commanding officers, industry experts and subject matter specialists presents a unique and unprecedented forum for all parties involved to exchange expertise and acquire valuable maritime domain awareness information. GNCC will explore various strategies and tactics employed in complex naval environments, the development of capabilities and integration of modern technologies, as well as force readiness against asymmetric threats.

INEGMA aims to increase discourse between friendly nations through efforts such as GNCC and will work in partnership with the UAE Naval Forces to construct and direct a conference that greatly benefits the maritime community. The connection between operating forces and industry will help transfer lessons learned and successful tactics in order to modify and manufacture effective modern naval technology.

GNCC 2013 will be a conference not to be missed for anyone in the defense and naval community. For registration please log in to the following link: www.inegma.com/gncc2013/registration.

GNCC will bring together Naval Commanders from the region

Strategic Analysis

Why did the UAE Stand by Egypt?

By: Mohamed Bin Hweeden
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The UAE's relations with Egypt are based on the UAE's awareness of the pivotal role of Egypt in the Arab region. Egypt is a large political, military, economic and human power that the Arab Gulf countries cannot ignore, as it has impact on the security of the region. Therefore, the UAE, since its establishment, has always considered Egypt as an ally, and stood strongly by Egypt since the early 1970's. This alliance was clearly reinforced in the reign of the Ex-president Hosni Mubarak, who enhanced and deepened Egypt's ties with the Gulf states. Therefore, it is never surprising that the UAE was worried about the new future that came with the toppling of the government of President Hosni Mubarak. The fall of an ally like Hosni Mubarak means that the Gulf states are before a new unfamiliar party that may affect the nature of the existing alliance between Egypt and the Gulf countries, so this feeling of worry was something normal. Yet the UAE, as well as the Gulf countries, announced its standing by the choice of the Egyptian people and their new government, by providing huge economic assistance in support of post-25 January Egypt.

The UAE, however, stood by the Egyptian people when they rose again on July 30 to correct their first revolution, and supported the legitimacy of the people against that of the regime. This UAE stand by Egypt was due to five major reasons:

- The blatant interference by the Egyptian Muslim Brotherhood movement, Which the Egyptian President Mohammed Morsi is a member of, in the internal affairs of the UAE through their support of the clandestine organization in the UAE for purposes that are harmful to the UAE security and stability, and the Egyptian President's tolerance of such interventions as if he blessed them, though he was supposed to try to prevent anything that causes tension in Egypt's relations with the GCC countries.
- The quick openness by the Egyptian government toward Iran. Iranian high-ranking delegations visited Egypt and opened areas of cooperation between the two countries. Of course, the UAE is not against Egyptian openness toward any country; but this rapid openness toward Iran, though Cairo knows that this provokes the GCC countries, raised the ire of the GCC countries and revealed The Egyptian's government's intentions toward the Gulf region.
- The UAE would not stand against the will of the Egyptian people. As the UAE supported the Egyptian people in their first revolution, it supported them, too, in their corrective revolution.
- The Egyptian military have always been the most prominent ally of the UAE. So when they stood by the Egyptian people, the UAE supported the Egyptian people and the military that sided by them against the rule of minority.
- The UAE, along with other GCC countries, believes that the security and stability of Egypt is an integral part of the Gulf security and stability, and hence it has to support all that helps to keep the security and stability of Egypt.

Therefore, the UAE supported, and is still supporting, Egypt. This is reflected in the high-profile visits made by the UAE officials to Cairo, headed by His Highness General Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces•

Abu Dhabi Ship Building and Babcock International Sign MoU

The new collaboration will be developing and delivering efficient solutions

This important collaboration will be developing and delivering efficient, cost-effective and comprehensive solutions to the UAE Navy and to other navy customers in the region

Abu Dhabi Ship Building, the leading shipbuilder and naval support services provider in the Gulf region, signed a Memorandum of Understanding (MoU) with Babcock International Group, the UK's leading engineering support services organization, to provide and deliver best-in-class Through-Life Capability Management(TLCM) solutions to customers in the UAE and elsewhere across the Middle East region.

The MoU was signed between ADSB Chief Executive Officer, Dr. Khaled Al Mazroui and Babcock Managing Director Warships, Mike Whalley, during DSEI.

Under the new agreement, this important collaboration will be developing and delivering efficient, cost-effective and comprehensive solutions to the UAE Navy, and to other navy customers in the region. The aim is to support and optimize maintenance, repair and refit activities across UAE armed forces. ADSB is also keen to look outside the UAE borders and provide similar solutions to complex Naval fleets across the region.

Babcock Managing Director Warships, Mike Whalley, said: "This collaboration poses an excellent opportunity for Babcock to demonstrate its expertise to the Middle East region and we look forward to a long term relationship working closely with ADSB. We will be bringing our extensive knowledge and experience in delivering through-life support services to navies around the world, and combining our international best practices with ADSB's local know-how to deliver optimized naval support, and maximized asset availability, to customers in the region."

Babcock Managing Director Warships, Mike Whalley and ADSB Chief Executive Officer, Dr. Khaled Al Mazroui signing the MoU at DSEI

ADSB provides state of the art construction, repair and refit services for naval, military and commercial vessels. Headquartered in Abu Dhabi and established in 1996, ADSB was originally formed to support the repairs and refits of UAE Navy vessels and now has a portfolio of construction and refit projects. Joint ventures and service agreements with world renowned companies allow ADSB to provide world-class support services to GCC maritime security forces.

ADSB leverages its reputation, central location and global network of strategic partners to consolidate its position as a leading shipbuilder and support contractor for naval, military and commercial operators in the region•

ADSB was originally formed to support the repairs and refits of UAE Navy vessels and now has a portfolio of construction and refit projects

ADASI signs product development and marketing agreement with Icarus Training Systems

ADASI
شركة أبوظبي الإستثمارية للأنظمة الذاتية
Abu Dhabi Autonomous Systems Investments

Abu Dhabi Autonomous Systems Investments (ADASI), a provider of autonomous systems for air, land and sea use and a subsidiary of Tawazun Holding, has signed a five-year product development and marketing agreement with UK-based Icarus Training Systems.

The signing ceremony was held on the margins of Defence & Security Equipment International – held in London between 10 and 13 September.

Since 2011, ADASI and Icarus have been co-operating on the development and integration of an aerostat system for an ADASI client and under the terms of this agreement will now be working more closely together to develop and market further products. ADASI will be primarily responsible for sales in the SAMENA region and Icarus for the rest of the world. ADASI has also undertaken to procure aerostat envelopes from Icarus.

Ali Al Yafei, CEO of ADASI, commented: "The existing co-operation between ADASI, as developers of aerostat systems, and Icarus, as accomplished manufacturers of aerostat envelopes, has made it clear to both parties that there is great potential in establishing an even closer level of co-operation in the future. We're looking forward to developing an exemplary offer for our clients."

In line with the strategic investment strategy of Tawazun, this agreement represents an important step in helping ADASI to contribute to the diversification of the UAE economy. By building a strong partnership with the UK-based Icarus, ADASI will be able to further enhance its local technological capabilities and create more local career opportunities.

Stuart Haycock, Managing Director of Icarus, added: "This agreement with ADASI advances our strategy of partnering with best-in-industry companies and is a reflection of our enduring commitment to the UAE. Working closely with ADASI on the development of an aerostat system for one of their clients has given us every confidence that there are significant synergistic benefits to be gained from closer collaboration in the future."

Abu Dhabi Autonomous Systems Investments (ADASI), based in Abu Dhabi and a subsidiary of strategic investment group Tawazun Holding, is focused on developing and acquiring knowledge and technological capabilities in autonomous systems for the UAE economy.

Established since 2007, ADASI's activities cover the acquisition, development, test, operation, training and full service support of autonomous systems for air, land and sea use. This includes the modification and reconfiguration of unmanned systems, in particular identifying and integrating alternative payloads.

In 2012, ADASI announced the initiation of a new range of small aerostat systems to meet current and future customer needs in both commercial and government applications in the SAMENA region.

A TAWAZUN SUBSIDIARY

ADASI

شركة أبوظبي الإستثمارية للأنظمة الذاتية
Abu Dhabi Autonomous Systems Investments

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Technology is Global
The Innovation is Here

www.adasi.ae

Teaching students how to think, not what to think

Marine Corps University plays a major role in the higher plans and strategies of the US

We had the opportunity to interview Brigadier General William F . Mullen III who is in charge of the education system of the entire Marine corps, both officers and enlisted together.

He ascertained that all officers and enlisted has to be prepared to deal with problems and challenges they are going to encounter when they go back to their normal jobs. The Brigadier General expressed the university and the USA's great respect and appreciation for the UAE, which he considers a friendly country.

Following is the interview:

By: Staff Major\ Yousef Juma Al Haddad
Lt. Khaleil Al Kaabi
Photos by: Ali Al Junaibi

When was your college established and what were the requirements for setting it up?

The Marine Corps University itself was established in 1989 to provide an overhead headquarters of all the schools, to pull them together and get everybody moving in the same direction. I'm in charge of the education system for the entire Marine Corps, both officers and enlisted. We have quite a few schools underneath us. We have the Marine Corps War College which is the equivalent to the National Defense University (NDU) and the Eisenhower School. That college was established in 1991. Below those we have the School of Advanced War Fighting; we have the Command and Staff College for intermediate officers and then Expeditionary Warfare School which is for captains. We also have enlisted education which comprises a number of different schools throughout the Marine Corps.

What is the vision and mission of the college, what are its objectives and

Students during an University training course


Training courses are designed to make students experts in planning process

those of the schools too?

We understand clearly that the world is getting more and more complicated every day. Everyone who comes through our doors - officer and enlisted - has to be prepared to deal with the problems and challenges they're going to encounter when they go back out to their normal jobs. They have to be able to think and make decisions and be able to deal with ambiguity, or unclear situations. Our vision and mission are to make sure when they leave us they can do all of that. We're teaching how to think, not what to think.

There's no doubt your college plays a major role in the higher plans and strategies of the US. Please tell us more about this important aspect.

Some of our colleges and the School of Advanced War Fighting in particular, boast a hand-selected group of Majors that get pulled from our immediate level course for a second year. They are very involved in operational planning. They go to specific places, have specific jobs and many of our general officers want them because of the skills they have obtained here. Our Marine Corps War College is similar in many ways.

Can you tell us the percentage of foreign students?

In almost every one of our schools in the officer program it's about 10 per cent. They're from all over the world. From the UAE, we currently have a colonel in the Marine Corps War College and we have a captain in the Expeditionary Warfare School. They both doing very well.

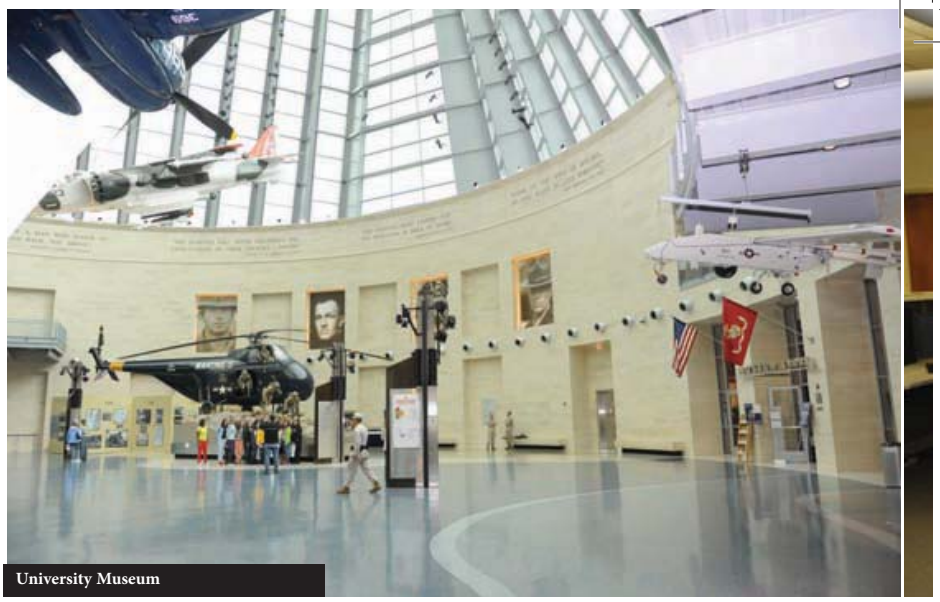
What does the college actually consist of and what are its specialities?

Each area has a different focus. Our Expeditionary Warfare School for captains is about preparing them to return to be company commanders, to command as a captain, and to some degree, act as a staff officer in a battalion-size unit, the smaller units. Our Command Staff College is oriented to majors and it enables students to operate at higher levels. This includes operating with some of the combatant commander staffs and working in the joint staff in the Pentagon. It also prepares them to an extent to be commanders when they are promoted to Lt Colonel.

Our Command and Staff College has over 200 students and 28 of those are selected to go to the School of Advanced War fighting. It's a very, very special course where they become absolute experts in planning. Other schools' studies involve planning but the School of Advanced Warfare aims to make students experts in planning process. Graduates later work for general officers in our large units. They can help that general officer make plans and take decisions for whatever problems are being faced. Our Marine Core War College takes Lt Colonels and in some cases Colonels and trains them to operate at the highest levels in key jobs such as at the Department of Defense and Joint Staff. Many go out to joint commands, working with other services. All our officers are required to become joint-qualified officers, meaning they've gone to a school and worked in a joint environment.

What does the college council comprise?

We have the Marine Corps University, so we have an executive steering committee that helps me make decisions. We also have a President's Planning Council where we pull in all the directors from the schools and we bring in this council when we want to deal with larger issues. We have an example of this at the moment because we want to go digital with


University Museum

everything. We want to do that across all the schools, so we take that to the President's Planning Council for discussion and outline how we're going to move forward with that. Each one of the schools has its own council. Some are very small such as at Marine Corps War College where they have a small administrative overhead, a director, a dean and the faculty. Our Command and Staff College is much larger and it has a faculty council that draws in the faculty from the other schools. Their purpose is to talk to me.

What is the level of coordination and cooperation between your college and the other US military colleges to upgrade academic output?

There's a formal process and in informal process. On the Joint Staff, the J7 in particular, there is Lt General Flynn, a marine General. He has the Military Education Coordinating Council which we all participate in. We talk about different issues, everyone gives a review and we outline what's going on at our respective colleges or universities. We discuss different challenges facing our students. And informally, I have visited all the schools. I discuss their challenges with them. My emphasis is on how to make this particular organization better by learning from what other people have done well

Does the college curriculum keep pace with the changes in the international arena? And does it accommodate struggles and conflicts such as what is happening in Afghanistan, the Iranian nuclear program and the Arab Spring?

Yes and no. Yes, because we are always making small adjustments to our curriculum so when really big issues come up we need to ensure people understand what is going on, so we do discuss these matters at various seminars. But when I say 'no', there are things about the operational art for the military that remain timeless. Also, we try to avoid making a lot of adjustments to our curriculum. This is especially if it's on short notice and perhaps the duration of an event isn't very long. We try not to alter a great deal because the students know at the beginning of the year they have a schedule and it is what they'll be dealing with over the course of 12 months. Those are the areas being prepared to be taught so we tend to change as little as possible for the benefit of the students. But when there are bigger events we discuss them, perhaps we will have a specialist speaker come in. We also have an organization called the Mid-East Studies Group which looks very closely at such important issues in its domain.

Can you outline concepts of the studies at the college - are they limited or do they cover wider areas of security?

We hire a lot of civilian faculty. We have military and civilian PHDs. Some colleges tend to mainly have retired military folk. We have plenty of faculty in uniforms so what we're trying to achieve is a much wider mind set by bringing in people of varied backgrounds. The reason for this is so we don't just focus on the military way of doing things. This approach expands students' horizons and gets them thinking about other things. It is all related to security, but we want to students to realize that when we talk about security in the world it isn't just about the military. There are many other aspects to be such as culture, economy, diplomatic influence, organized crime and more.

Many countries around the world are keen to send students to your college to partake of the various courses there. What are the advantages for American students sharing time with students from the rest of the world?

It's absolutely essential to what we do here. The mind-set they bring is a completely different way of looking at things. Our students love that. They delight in talking to the international students, they love learning about the different cultures out there. If there's a small group having a discussion and it's confined only to US military we all tend to look at things the same way. However, if you bring in people from other organizations, but especially from other countries, if provides different points of view. We would not be doing as well as we are with our students if we did not have international students as part of our curriculum. It's vital.

What are the main perils for students that you focus on for when

University Library

they graduate?

They have to understand that this world is changing and it changes very fast. One of the aspects that helps that change is technology. They need to comprehend the threat that comes from all the devices they are using to get their job done. It's what we refer to as the cyber realm or cyber warfare. When people look at the strength of our military they're not going to be willing to take us on directly so they're going to find other ways to do it as people have done in the past. We have to be able to adjust to that.

We try to get everybody to learn that the education you get here does not stop here. Keep expanding your horizons - that's the only way you'll stay effective and efficient as a military officer.

Do you maintain contact with graduates after they leave the college?

Not as much as we would like to. We have the Marine Corps Heritage Foundation which supports us in what we do. They send out newsletters and various forms of information. We do ask the students that after they have been gone from here six months to respond to questions from us like "what was the education here like, was it good enough, did we miss anything out?" But generally we don't get that much feedback. Some graduates will come back and visit and speak to their old professors. We'd like more.

The relationship between the US and UAE has reached a stage of maturity and what could be a model of a relationship. How can educational institutions in both countries capitalize for common interest and mutual benefit?

By an increased level of exchanges with more officers going to the UAE and more UAE officers coming here. That's really what's required. We need to see what you're doing and you need to see what we're doing. By the increased level of interaction we increase the level of understanding and that's always a good thing.

The UAE plays a vital role in humanitarian aid worldwide. Your thoughts?

I think it's great. The world's a tough place and those in the UAE in particular live in a very tough neighborhood but when you go out and do humanitarian-type events people look at your differently. Here's an example – we did not have good relations with Indonesia prior to the tragic tsunami, the tidal wave that hit them in 2004. But because we had a large presence in the region we helped them with a lot of humanitarian assistance and it completely changed the attitude of most Indonesians to the US. They now realized that all the things they thought they knew about Americans were not necessarily the truth. It's the same with what the UAE is doing with humanitar-

Brigadier General William F. Mullen

Brigadier General Mullen was commissioned via the NROTC program at Marquette University in 1986. He was assigned to 1st Battalion, 3rd Marines in Kaneohe Bay, HI where he served as a rifle and weapons platoon commander, and Battalion training officer.

He was transferred to the Marine Corps Security Force Battalion, Pacific at Mare Island, CA where he served as a platoon commander, executive officer and Commanding Officer.

During this period he deployed to Operation Desert Shield.

After attending the Advanced Artillery Officer course at Fort Sill, Oklahoma 1993, he was transferred to 2nd Battalion and was assigned as the Commanding Officer of Fox Company.

He participated in Operation Sea Signal in 1994.

From 1996 to 1999 he served as the Inspector-Instructor for Fox Company, 2nd Battalion, 24th Marines in Milwaukee.

In early 1999 he was selected to be the Marine Aide to the President.

He joined Advanced Warfighting school in 2001, and after that reported to the Joint Operations Division of the Joint Staff, J-3 for duty in the PACOM and CENTCOM sections. He then served as the Executive Assistant to the Deputy Director for Regional Operations until 2004.

In late 2004 he was chosen to be the Operations Officer for Regimental Combat Team – 8, and deployed to Fallujah, Iraq from 2005 to 2006.

Attended the Naval War College at Newport, RI from 2008 to 2009, followed by command of the Marine Corps Tactics and Operations Group in 2009.

Since July 2012 he has served as the Commanding General, Education Command and President, Marine Corps University, as part of the Marine Corps Combat Development Command at Quantico, VA. He was promoted to his current rank on 12 Oct 12.

Brigadier General Mullen holds a BA and MA in Political Science from Marquette University, as well as an MA in National Security and Strategic Studies from the Naval War College. He is a graduate of the Airborne, Ranger, Summer Mountain Leader and Royal Marine Arctic Warfare Survival courses.

ian efforts. The more you go out there and say, "I'm a human being just like you and I care about you", it changes things and makes the world a better place. Some say the military shouldn't be doing it, but who else can? Who else other than the military has the ability to get there, to protect themselves and get the job done. There's no-body else.

The UAE has recently established its National Defense College. How important is this college in supporting national security and stability and to what extent can it help train leadership from other countries?

It goes back to education. We have training and that prepares you for what you'll have to do and you have education which prepares you for whatever happens. And as we know, what we think is going to happen rarely occurs. We have to have the ability to adjust and it would be the same for militaries around the world. Whatever your government tells you to do, you have to have the ability to go there, figure out what the problem is and how to fix it. It may not be strictly a military problem either; there may be many other facets. When you try to fix something solely with a military solution it's probably wrong. It makes your military in the UAE and ours in the US much more effective. Our problem is we've had people operating in Iraq and Afghanistan over the past six, eight, ten years, who think they have all the answers. They don't. They need to know what comes next. Many of our officers 'didn't know how much they didn't know' until they came to our school.

Many countries are keen to send students to your college. What are the benefits for the international students?

They gain exposure to the America culture. It enables them to understand so many things. There are mis-perceptions out there about what American culture really is and what happens in America. A lot of this is due to the stupid things Hollywood puts out and some people think that what they see in the movies is all there is to America. It's not true. It would be the same if I saw a movie about the UAE. I wouldn't know about it. You have to look at the world through the eyes of the person you are talking to if you want to know what they're about.

Brigadier General Mullen III with Staff Major Haddad, Nation Shield

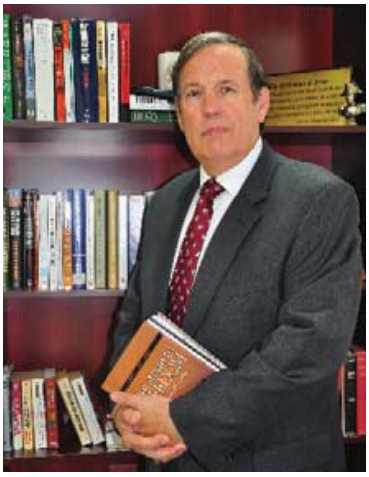
Do you think international information warfare represents a major new challenge to the armed forces in general?

Yes. Definitely. Information warfare hinges on an audience. If that audience doesn't understand what you're saying but if you present that information in a way that they don't agree with or they can't understand you're not effective at all with your information warfare. Here's an example from Iraq – we were trying to put out information to the communities and we made up these nice professional-looking color picture-documents. But the locals didn't like it. We started looking at how they got their information what was credible to them. Maybe it was just conveyed on a piece of paper, but it was much more effective. We have some people who think they're very smart and that a product will work. It won't - it must be what the people are used to and what they like. A lot of Americans doesn't understand that or don't agree with it – and they're not right.

What are the difficulties and challenges that face the foreign students?

Much centers on the language. Students do have to pass a language test before they come here so of course they understand English. However, there's understanding a language and being very, very familiar with that language. There are some difficult areas in that regard when they are here. They'll also have to participate in discussions and write effectively in English. That can present difficulties at times. But we have people who help with all that. The language side can be difficult but the students are all doing well•

"Regional Instability – Today's Primary Challenge"



By: Dr. John R.Ballard
Dean of National Defence College
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Syria today, Egypt last month, Turkey the month before…. It is not surprising that humans crave stability in life, since instability, particularly region-wide instability, can have significant negative effects on everyone. One goal for any sound national security strategy should be to enhance regional security in order to improve domestic prosperity. Regional instability has a deleterious effect on four key elements of national security: interstate commerce, national economics, individual prosperity and diplomatic relations.

Commerce: Without regional security trade slows due to insecure transit routes, prices increase due to rising insurance rates and increased time delays, and tourists simply refuse to travel to locations which seem too dangerous to visit.

Economics: Stock markets fall, prices rise and people and companies hoard resources with instability, international companies become hesitant to invest in local markets and the costs of labor and technical expertise required for infrastructure improvements skyrocket. Last month, Dr. Jasem Al Mannai, Director General of the Arab Monetary Fund, confirmed in a Gulf News interview that: "Global demand and regional political instability remain the two main factors that will affect the performance of Arab economies in the coming two years. ... Hopefully, the return of political stability in the region, particularly in countries that are undergoing political transition, will be achieved, so as to regain investor's confidence and restore macroeconomic stability."

Individual prosperity: Human security declines as refugee flows burst borders, overwhelm local response capabilities and increase prices of staples for all citizens; disease rates increase and those least able to cope are affected most severely, which causes cultural deterioration. According to the UN, nearly two million Syrian children — virtually an entire generation — have dropped out of school over the last year due to the devastation caused by the civil war. Sectarian divisions become more acute as conditions worsen for everyone, and as human security erodes, crime and incidents of terrorism increase.

Diplomatic relations: Traditional diplomatic relations are complicated by instability; trust decays; nations that have been close allies grow distant and former enemies grow more vocal in critique. Most importantly, without effective diplomacy, other, more harmful responses become more likely.

So given the clear negative impact, how can officials work to prevent regional instability? One would hope that states themselves could reduce tensions, but unfortunately the more common approach has required working through international bodies such as the Arab League, the GCC or the UN. Even though these organizations are not always formed specifically to deal with instability, their words and actions have positive effects, are accepted more readily among rivals, and thus are more appealing in times of regional crisis.

Secondly, nations can contribute aid and enhance investments to strengthen economic linkages among regional neighbors; the UAE has been particularly strong in this area. Helping other nations strengthen their government institutions is also very helpful. Finally, candid, transparent dialog, at all levels and through every means, can help reduce tensions, prevent misunderstandings and increase trust.

Obviously, the use of force rarely increases regional stability and should always be the last resort for regional problems. Enduring regional instability makes every other type of national security more challenging and strategists should make moderating it a consistent first priority.

Offshore Patrol Vessels

The Future of Naval Logistics

The global naval vessels and surface combatants market has an estimated value of $28.9 billion in the year 2013. Piracy is the most significant threat facing global navies, border security patrols and commercial sea traffic. Continued investment and attention to the problem is needed due to the sheer volume of traffic now moving through the sea.

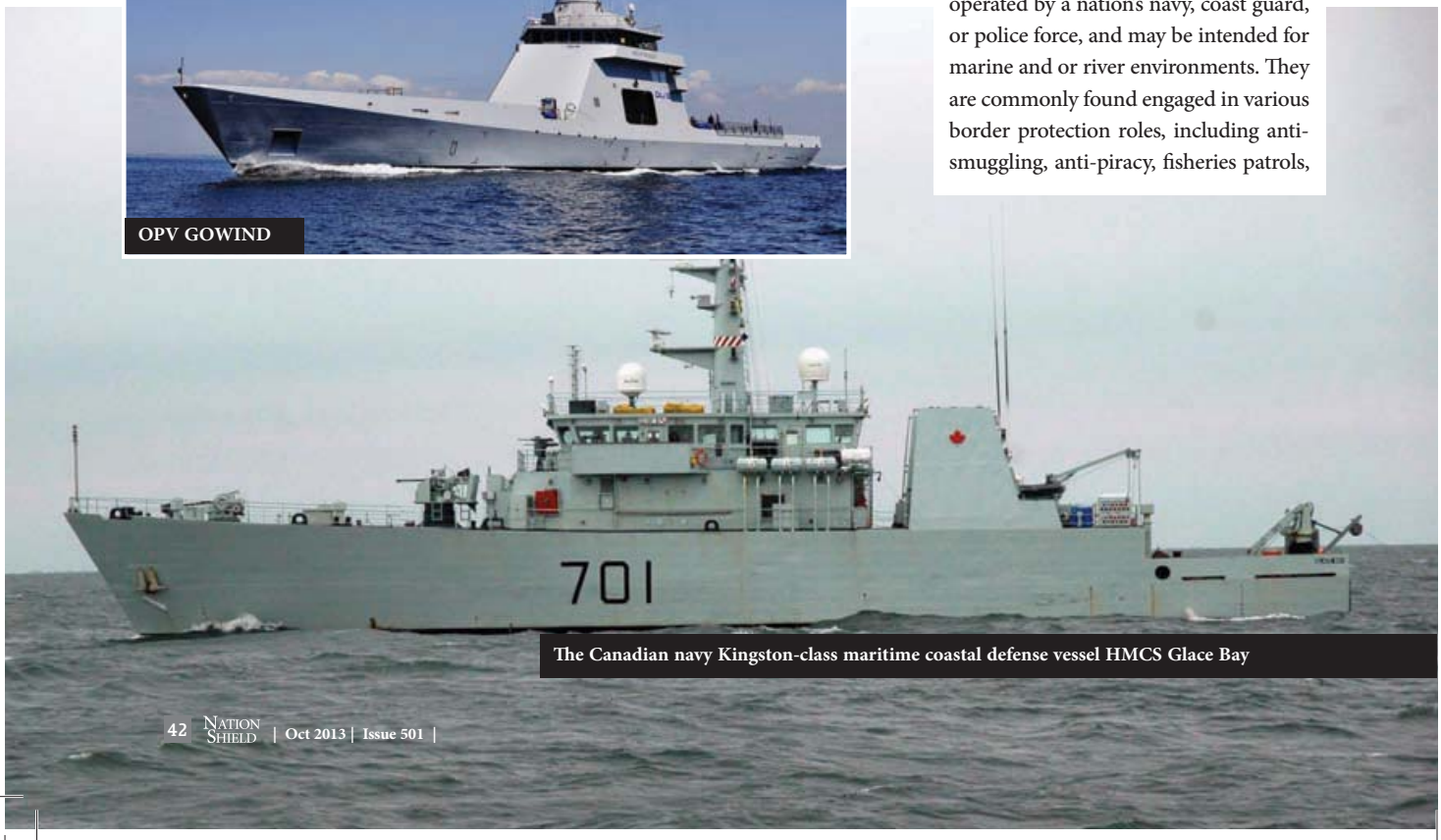
OPV GOWIND

International sea lanes have to be heavily steered along the African coasts – both East and West – and the fact that smaller companies moving through these areas are the most vulnerable as many of them do not hire private security makes the threats graver.

Specific areas of concern include the Suez, the Straits of Malacca, and the Arabian Gulf, as well as the Gulf of Aden, which is an expanse roughly the size of Europe. One of the timeless challenges is coordinating a rapid response to a pirate attack when ships must cover such large distances. Even advanced maritime vessels can take days to reach the source of an alert.

In this situation the significance of owning and operating high speed offshore patrol vessels becomes a decisive factor in determining the strength of any naval force.

A patrol boat is a relatively small naval vessel generally designed for coastal defense duties. There have been many designs for patrol boats. They may be operated by a nation's navy, coast guard, or police force, and may be intended for marine and or river environments. They are commonly found engaged in various border protection roles, including anti-smuggling, anti-piracy, fisheries patrols,



The Canadian navy Kingston-class maritime coastal defense vessel HMCS Glace Bay

HMS Clyde operates around the Falkland Islands in the South Atlantic

and immigration law enforcement. They are also often called upon to participate in rescue operations.

Classification of Patrol Vessels

They may be broadly classified as inshore patrol vessels (IPVs) and offshore patrol vessels (OPVs). The offshore patrol vessel is a highly versatile ship, designed to perform Economic Exclusion Zone management roles, including the provision of maritime security to coastal areas and effective disaster relief.

The OPVs are warships typically smaller in size than a corvette and can include fast attack craft, torpedo boats and missile boats, although some are as large as a frigate. They are usually the smallest ship in a navy's fleet that is large and seaworthy enough to patrol off-shore in the open ocean. In larger militaries, such as in the United States military, offshore patrol vessels usually serve in the coast guard, but in many smaller nations navies operate these types of ships.

We will have a look at some of the patrol vessels naval forces around the world use.

Kingston Class, Canada, Halifax Shipyards

The Kingston Class maritime coastal defense vessels were built by Halifax Shipyards Ltd. The first of the 12 ships was commissioned in September 1996 and the final one was commissioned in April 1999.

The ships are named the Kingston, Glace Bay, Nanaimo, Edmonton, Shawinigan, Whitehorse, Yellowknife, Goose Bay, Moncton, Saskatoon, Brandon and the Summerside. Six ships are stationed on the east coast for operations on the Saint Lawrence and the Atlantic and six ships are based on the Pacific Coast.

The 12 Kingston Class ships provide a single class of vessels for multifunctional use by the Canadian Naval Reserves. Canada is the second largest country in the world and has a coastline of 243,791km.

The hull is a longitudinally framed structure and has been designed to minimize the steel weight. The design was based on a hard chine hull form. The construction involved initial production of partially outfitted steel block units, which were assembled into blocks and the blocks were integrated into the ship. The ship is equipped with four main Wärtsilä UD 23V12 diesel motors and four alternators and two Jeumont electric motors (600V DC).

The vessels are capable of carrying two

A patrol boat is a relatively small naval vessel generally designed for coastal defense duties

20ft ISO containers on the open deck aft. The decks are fitted with the necessary power cables ready to install the containers which are mission-specific operational payloads.

The ship is equipped with a Bofors 40mm Model 60 mk5C rapid fire gun and two 12.7mm machine guns. The Bofors gun is mounted on the forecastle deck and the arc of fire extends forwards by ±120°. The machine guns are mounted on either side at the front of the bridge deck. In a depressed position, each machine gun fires in an arc of fire of 118°. The ship is equipped with one of three modular mine countermeasures systems: the deep sea

Thales MMS mechanical mine sweeping system, the route survey system or the Sutec remotely operated vehicle (ROV) mine inspection system.

River Class, UK, BAE Systems

The River Class patrol ships from BAE Systems can be used for anything from fire-fighting to disaster relief operations. There are four in all; HMS Tyne, Mersey and Severn, and HMS Clyde which operates around the Falkland Islands in the South Atlantic. Tyne, Mersey and Severn each have a crew of about 45 sailors, working at least 275 days a year at sea.

BAE System's family of offshore patrol vessels comprises 80 meter and 90 meter versatile and affordable ships. Their adaptable design is well suited to the export market and can be altered according to individual customer needs, ensuring they can meet the operational requirements of navies around the world.

The 90 meter vessel is equipped with air surveillance radar which can be used to detect low flying aircraft often used in smuggling operations. The ship's rigid inflatable boat can be deployed swiftly from the davits for recovery and rescue operations and gives the ability to conduct sea boarding.

Its automated 30 mm small caliber gun system can engage fast inshore attack craft armed with short-range missiles, rockets, rocket-propelled grenades, machine guns or explosives, while 25 mm guns mounted port and starboard provide secondary armament to the vessel.

Featuring a 20 meter long flight deck, the 90 meter ship can land and fuel a medium-sized helicopter, up to 7 tons. It also provides ample deck space of up to six 20ft ISO containers for mission stores or humanitarian aid, with a 16 ton capacity crane enabling cargo to be easily discharged to a jetty.

Offering a high standard of accommodation, this ship has sleeping quarters,

dining and recreational facilities for up to 70 crew members but is capable of operating with a lean crew of just 36. It also incorporates additional cabin accommodation for up to 50 other personnel such as trainees, special forces, scientists or medical teams.

BAE Systems designed and built the UK Royal Navy's River Class ships and continues to provide support to the vessels under a contract for availability arrangement.

Gowind L'Adroit OPV

Specially designed for maritime protection and security missions, the Gowind OPVs from DCNS can carry all the prevention and action assets necessary for surveillance and policing tasks at sea, including fast commando boats, assault or transport helicopter, unmanned surveillance vehicles, electronic warfare interceptors, shell plating doors, secure high bitrate communication facilities and command aids. Thanks to exceptional endurance and manned by crews as small as thirty persons, the Gowind OPVs provide an economical solution for ocean surveillance and security.

At sea, the crew can easily and rapidly assess the situation from the panoramic bridge. It can count on the effectiveness and robustness of the easy-to-use POLARIS mission system and on sensors grouped in the integrated mast to provide high-quality information, alerts and decision aids at any time.

More than technological prowess, the Gowind OPV L'Adroit is an industrial challenge. Designed and built by DCNS in a record time of less than 24 months, it also was based on important partnerships. Many manufacturers – including Sagem (Safran Group) – brought their experience.

Sagem equipped the OPV L'Adroit with the EOMS NG. The only system in the world capable of associating long-range infrared panoramic search and track with electro-optical gun fire control, EOMS NG provides detection, identification, and gun engagement of all surface and air targets, from anti-ship sea-skimming missiles to fast incoming attack craft (FIAC). Moreover, it is fully remote controlled from POLARIS, the Combat Management System (CMS) developed by DCNS.

Completing the conventional radar with optronic systems makes the Gowind OPV L'Adroit a relevant response to

OPV L'Adroit

an increasingly uncertain security context, where asymmetric threats are now to be reckoned with alongside traditional military threats.

Heavily involved in the Gowind adventure, Sagem has also installed one of its inertial navigation systems on board of L'Adroit. Innovative and upgradable, SIGMA 40 is based on ring-laser-gyro technology, the most suitable technology for Navy applications which is already in use in 32 Navies worldwide. This is the most sold inertial system in the world.

This system offers to the Gowind OPV L'Adroit a high level of performance and accuracy. It is compact, sturdy, and provides to the crew all the data deemed crucial to navigate including: heading, roll and pitch, angular velocities, position and heave. The crew took note of the Gowind OPV L'Adroit comfort.

Ghannatha Class Missile Boats, UAE, Abu Dhabi Ship Building

Abu Dhabi Ship Building Company (ADSB) is a leading provider of construction, repair and refit services for naval, military and commercial vessels. Headquartered in Abu Dhabi, UAE and established in 1996, ADSB was originally formed to support the repairs and refits of UAE Navy vessels and now has a portfolio of construction and refit projects worth over Dh3 billion.

ADSB is 40 percent owned by Mubadala, 10 percent by Abu Dhabi's government and 50 percent publicly traded on the UAE's stock exchange.

ADSB vessels include the MRTP16 High-Speed Interceptor, 27m Ghannatha Class Missile Boat and 72m Baynunah Corvette. Built from high-tech composite materials including kevlar and carbon fiber, the 26 ton high-speed interceptors reach speeds in excess of 65 knots. They are powered by MTU engines driving Arneson Surface Drives, have a crew of five and are used for quick response missions.

Manufactured in marine grade aluminum alloy, the 45 ton Ghannatha Class Missile Boats reach speeds in excess of 40 knots. Powered by MTU engines and Rolls Royce Waterjet propulsors, the vessel can be offered in various configurations as a fast troop carrier, mortar boat, gun boat and missile boat.

The 72m Baynunah Corvette is designed in conjunction with ADSB's strategic partner CMN of France and represents the very latest in naval capability. It is manufactured in steel (hull) and aluminum alloy (superstructure) and has a maximum speed of 30 knots thanks to a quad MTU engine installation and triple Rolls Royce waterjet configuration.

The Corvette is also fitted with a plethora of weapons systems including three types of missiles and two types of guns. It is fitted with the very latest technology sensors and communications suites. The vessel is also capable of handling a five ton naval helicopter and has also been designed to be fitted with a hangar as well as the HELO Deck.

Piracy Deterrent

Counter-piracy operation is an area wherein the international maritime community has been working towards better integration. What has been accomplished is the establishment of the Combined Maritime Forces and its task force dedicated to a joint approach to countering piracy (CTF-151). This is formed of 26 member nations and is working alongside NATO member nations, EU member nations, as well as with other states with shared interests, including India, Brazil, Russia, China, and Middle East countries like the UAE. NATO hopes to create synergy between these forces, pooling the skill sets, information, training, and anything else that could benefit the group. The success of count-piracy operations depends on timely coordination of the assets available. Offshore patrol vessels can play a major part to deter and disrupt acts of piracy•

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EA-18G GROWLER

The World's Premier Electronic Attack Aircraft

The Growler is an advanced airborne electronic attack platform, providing electronic intelligence, surveillance and reconnaissance data to other aircraft. It has been combat deployed since 2010 by U.S. and allied forces around the world.

The EA-18G Growler is a variant of the combat-proven F/A-18F Super Hornet Block II, and conducts airborne electronic attack missions. It combines the capability of the combat-proven Super Hornet with the latest Airborne Electronic Attack (AEA) avionics suite evolved from the Improved Capability III (ICAP III) system. The EA-18G's vast array of sensors and weapons provides the warfighter with a lethal and survivable weapon system to counter current and emerging threats.

The EA-18G Growler is the U.S. Navy replacement for its current AEA aircraft, the EA-6B Prowler. The program of record for the Navy is 114 EA-18G Growler aircraft. The Growler provides critical electronic intelligence, surveillance and reconnaissance (ISR) data to other joint force aircraft. It brings fighter aircraft speed and maneuverability to an electronic attack aircraft. The Growler is capable of protecting itself against adversarial aircraft using its AIM-120 Advanced Medium-Range Air-to-Air Missiles and is best suited to provide advanced survivability and electronic protection for ground, air and maritime combat forces.

Design

One of the most noticeable external visual characteristics of the EA-18G Growler aircraft is that the wingtip air-to-air missiles on the F/A-18 Super Hornet are normally replaced by wideband receiver pods on the EA-18 Growler and the other hardpoints carry a mix of electronic warfare pods and weapons.

The aircraft construction includes a light alloy multispar wing and high-strength graphite and epoxy panels and doors. Northrop Grumman manufactures the rear and centre fuselage sections and EADS CASA is responsible for the manufacture of structural components such as the fuselage rear

EA-18G Growler is the U.S. Navy replacement for its current EA-6B Prowler

side panels, horizontal tail surfaces, flaps, the leading edge extensions, the rudders and the speed brakes.

The aircraft has retractable tricycle-type landing gear. The main landing gear is single wheeled and turns through 90° to retract rearward into the wheel bays mounted in the engine air ducts. The aircraft has a twin-wheel nose gear. The nose of the aircraft is fitted with a catapult launch tow bar. An arrester hook is installed under the rear section of the fuselage.

Engine

The Growler is powered by two F414-GE-400 afterburning turbofan engines, supplied by General Electric. A titanium engine firewall is incorporated into the aircraft structure. The engines are rated to supply 62kN or 98kN with afterburn.

Industry Team

The Growler is built by the world's premier and most experienced electronic attack aircraft team. The team of Boeing, Northrop Grumman, General Electric, Raytheon and 1,400 suppliers continues to add capabilities, improve design, deliver on schedule and drive down costs to ensure the Growler is capable, affordable and available.

Programme and Development

Boeing and the U.S. Navy signed a five-year System Development and Demonstration (SDD) contract on Dec. 29, 2003. Northrop Grumman is the major supplier to Boeing for the AEA subsystem. The SDD contract encompassed all laboratory, ground and flight tests from component level testing through full-up EA-18G weapons system performance flight testing.

Assembly of the first EA-18G flight test aircraft began in October 2004, and the first flight test aircraft moved into modification in late April 2005, ahead of schedule. The first production aircraft made its first flight on Sept. 10, 2007, and was delivered to the U.S. Navy on Sept. 24, 2007, almost one month ahead of schedule. The first production aircraft was delivered to Fleet Readiness Squadron VAQ-129 at Naval Air Station Whidbey Island, Wash., on June 3, 2008, and the aircraft began its initial sea trials in August 2008. The Growler completed initial sea trials onboard the USS Dwight D. Eisenhower in August 2008, Initial Operational Test and Evaluation in May 2009 and achieved initial operational capability in September 2009. The Department of Defense authorized the EA-18G to enter into Full Rate Production in November 2009. The EA-18G's initial combat deployment occurred in late 2010 and concluded in mid-2011, supporting operations in Iraq and Libya.

Electronic Warfare Dominance

The EA-18G integrates advanced airborne electronic attack capabilities, developed and manufactured by Northrop Grumman, with the advanced strike capabilities, including advanced weapons, sensors and communications systems, installed on the F/A-18 Super Hornet aircraft.

The Growler aircraft has 11 weapon stations for carrying electronic mission systems and weapons

RAAF will be receiving 12 EA-18G Growlers worth $1.5 billion and plans to achieve IOC by 2018

The block 1 Growler is fitted with up to three AN/ALQ-99 radar jamming pods, together with an AN/ALQ-218(V)2 receiver and a Raytheon AN/ALQ-227 communications countermeasures system both of which are mounted in the bay previously designated as the F/A-18 Hornet aircraft's gun bay.

The AN/ALQ-99 jammer fitted on the block 1 Growler is supplied by the EDO Corporation. The AN/ALQ-99 receivers are installed in the tail of the aircraft and the AN/ALQ-99 pod houses the exciters and the high radiated power jamming transmitters.

"The Growler aircraft has 11 weapon stations for carrying electronic mission systems and weapons."

The block 2 Growler is equipped with the APG-79 multi-mode radar with passive detection mode and active radar suppression, ALQ-218(V)2 digital radar warning receiver and ALE-47 countermeasures dispenser.

The advanced tactical radar, the APG-79 Active Electronically Scanned Array (AESA) radar provides air-to-air and air-to-ground capability with detection, targeting, tracking and protection modes.

The interleaved radar modes include real beam-mapping mode and synthetic aperture radar mode with air-to-air search, air-to-air tracking, sea surface search and ground moving target indication and tracking. The radar has an advanced four-channel receiver-exciter which provides wide bandwidth capability and the ability to generate a wide range of waveforms for electronic warfare, air-to-air and air-to-ground operation. It also has the ability to operate in multiple air-to-air and air-to-ground modes simultaneously.

Sensor System Upgrades

The U.S. Navy recently flew EA-18G Growler with sensor system upgrades and its newest data network, demonstrating how the enhanced technologies would allow aircrews to locate threats more quickly and accurately.

Ultimately, the secure, high-speed network will allow aircrews to share targeting data in real time. The technology will be incorporated into deployed Growler electronic attack aircraft in 2018, sooner than all Navy aircraft other than the E-2D Hawkeye surveillance airplane.

These enhancements provide a significantly faster, more accurate and adaptable targeting solution. The result is a more capable EA-18G that is better able to control the electronic attack spectrum.

The upgrades are planned to be retrofitted into existing Growlers and included as a standard offering for future new aircraft sales. Boeing will work closely with supplier partners Northrop Grumman, Harris Corporation, L-3 Communications and Rockwell Collins to add system upgrades to the fleet.

Milestones

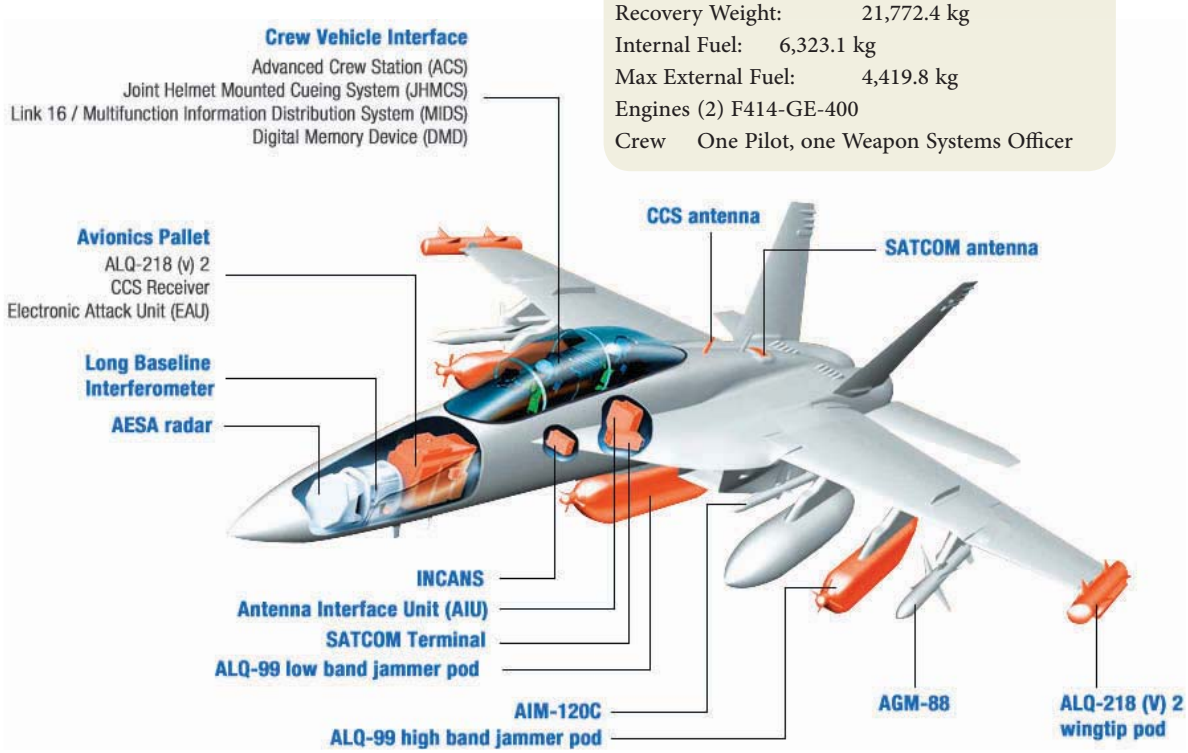
- 2001: Successful initial flight demonstration of EA-18 AEA variant.
- 2004: Start of System Development and Demonstration.
- 2006: First Flight.
- 2007: First Production Deliver.
- 2008: Successful Sea Trials.
- 2009: Initial Operational Capability.
- 2010: Initial combat deployment supporting operations in Iraq and Libya.

EA-18G Capabilities

Suppression of Enemy Air Defenses: The EA-18G will counter enemy air de-

Technical Specification:

Length: 18.3 m
Height: 4.9 m
Wing Span: 13.7 m
Weight Empty: 15,011.2 kg
Recovery Weight: 21,772.4 kg
Internal Fuel: 6,323.1 kg
Max External Fuel: 4,419.8 kg
Engines (2) F414-GE-400
Crew One Pilot, one Weapon Systems Officer



fenses using both reactive and pre-emptive jamming techniques.

Stand-off and Escort Jamming: The EA-18G will be highly effective in the traditional stand-off jamming mission, but with the speed and agility of a Super Hornet, it will also be effective in the escort role.

Non-Traditional Electronic Attack: Dramatically enhanced situational awareness and uninterrupted communications will enable the EA-18G to achieve a higher degree of integration with ground operations than has been previously achievable.

Self-protect and Time-Critical Strike Support: With its Advanced Electronically Scanned Array (AESA) radar, digital data links and air-to-air missiles, the EA-18G will have self-protection capability and will also be effective for target identification and prosecution.

Growth: High commonality with the F/A-18E/F, nine available weapon stations and modern avionics enable cost-effective synergistic growth for both aircraft, setting the stage for continuous capability enhancement.

Airborne Electronic Attack (AEA) Capabilities

Full Spectrum: The EA-18G's ALQ-218 wideband receiver combined with the ALQ-99 Tactical Jamming System will be effective against any radar-guided surface-to-air threat.

Precision Airborne Electronic Attack: Selective-reactive technology enables the EA-18G to rapidly sense and locate threats with a significantly higher degree of accuracy than was previously possible. This improved accuracy enables greater concentration of energy against threats.

Advanced Communication Countermeasures: Its modular ALQ-227 Communication Countermeasure Set enables the EA-18G to counter a wide range of communication systems and is readily adaptable to an ever-changing threat spectrum.

Interference Cancellation System (INCANS): INCANS dramatically enhances aircrew situational awareness by enabling uninterrupted communications during jamming operations•

Reference / Photo
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