More dipping sonars from Raytheon

Raytheon is being awarded a $158 million firm-fixed-price contract for the procurement of 48 MH-60R Airborne Low Frequency Sonar (ALFS) systems, including associated program management support, by Naval Air Systems Command. Raytheon had previously been awarded an $80.8 million contract modification from the US Navy in support of the FMS acquisition of the ALFS by the Royal Australian Navy.

ALFS is the primary undersea warfare sensor for the USN’s (and RAN’s) MH-60R Romeo multimission helicopter with the FMS contract representing the first international sale of Raytheon’s advanced anti-submarine warfare sensor. This integrated dipping sonar system enables the MH-60R to accomplish such USW missions of submarine detection, tracking, localisation and classification. It also performs missions relating to acoustic intercept, underwater communications and environmental data acquisition.

The AN/AQS-22 is the only in-service dipping sonar with multi-frequency operation enabling it to adapt its performance to varying environmental conditions. With a rapid search rate, the AN/AQS-22 identifies and neutralises threats sooner, enabling it to cover a larger area. The AN/AQS-22 also permits a longer detection range over a wider area, reducing the number of helicopters required to perform active anti-submarine warfare (ASW) screening.
Austal enters partnership with Sembawang Shipyard

Austal and Sembawang Shipyard have entered into a strategic partnership to provide market-leading sustainment capability to the US Navy.

Austal and Sembawang Shipyard will together provide support specifically tailored to the US Navy’s fleet of Littoral Combat Ships (LCS) and Joint High Speed Vessels (JHSV), both of which are expected to operate in the region. The first LCS is expected to deploy to Singapore in early 2013.

Austal is currently contracted to build ten 103-metre JHSVs under a US$1.6 billion contract and six 127-metre LCSs, four of which are a part of a 10-ship, US$3.5 billion contract. Austal has already delivered one LCS and one JHSV.

“Our strategic partnership with Sembawang Shipyard is the cornerstone of Austal’s Asia-Pacific support offering and reinforces Austal’s commitment to the region and to the US Navy, Austal chief operating officer – service and systems, Charles McGill, commented. “Together with our facilities in the Philippines, Darwin and Perth, Austal is now positioned to provide critical sustainment in an increasingly important part of the world.”

Austal enters into this partnership following the October 2012 acquisition of Darwin-based HKME, and the appointment of Michael Little as regional service manager – Asia.

Early MUOS benefits for ADF anticipated

Tom Muir

News that the US Army has ordered MUOS field upgrades for GD’s AN/PRC-155 manpack radio to enable it to communicate with the first Mobile User Objective System (MUOS) satellite, launched in February last year, brings elements of the ADF’s Battlefield Communications System under JP 2072, closer to achieving a 16-fold increase in their secure satellite communications capacity through use of mobile 3G technology.

As ADM has previously reported MUOS consists of four satellites in geosynchronous earth orbit (GEO) with one on-orbit spare, and a fibre-optic terrestrial network connecting four ground stations (since the satellites can’t communicate directly
with each other). The ground stations are located at the Australian Defence Satellite Communications Station east of Geraldton, WA; in Sicily (Italy); in southeast Virginia; and Hawaii.

MUOS satellites are equipped with a Wideband Code Division Multiple Access (WCDMA) payload that provides a 16-fold increase in transmission throughput over the current Ultra High Frequency (UHF) satellite system. Prime contractor Lockheed Martin tailored a previously commercial waveform to be used with the new WCDMA payload. The US government has made the waveform available for military satellite communications terminal providers through the Joint Tactical Networking Centre (JTNC) Information Repository, and contractors can now integrate the waveform into their MUOS-compatible terminals to provide WCDMA capabilities for users.

Each MUOS satellite also includes a legacy UHF payload that is fully compatible with the current UHF Follow-on system and legacy terminals. This dual-payload design ensures a smooth transition to the cutting-edge WCDMA technology while the legacy system is phased out.

The first MUOS satellite and associated ground system already provide initial on-orbit capability. After the second MUOS satellite is launched in July and completes on-orbit testing and check-out with the ground system and a manpack terminal certified with the MUOS waveform, the system will provide full WCDMA capability to users.

While the PRC-155 will be the first MUOS terminal in the field other vendors have been busy developing their radios to receive the MUOS waveform when it becomes available. Thales has added another channel to its PRC-148 enhanced MBITR radio which has received UHF satcom waveform certification from the JTNC. The certification of this waveform allows soldiers carrying AN/PRC-148 radios to perform satellite communications without having to carry cumbersome satcom equipment. MUOS capability is presumably the next step for that radio which is in ADF service.

Harris will provide MUOS capability through its Falcon 3 AN/PRC-117G tactical satellite radios. These software-defined, multiband radios used in ground vehicles and command posts were redesigned in 2010 to become MUOS-compatible. Once the MUOS waveform is ready, Harris will begin loading it onto approximately 10,000 AN/PRC-117G radios fielded presumably including those held by the ADF.

Under JP 2072’s first phase Harris received a $112 million order for the supply of AN/PRC-152(C) multiband handheld radios, but also AN/PRC-117G wideband, AN/PRC-117F multiband and AN/PRC-150(C) high-frequency (HF) manpack radios. While the 117G tacsat radios will be able to access the MUOS system through UHF, their satcom capacity will be increased enormously once upgraded to full WCDMA capability. No doubt the ADF will be pressing Harris through its $14.7 million field support contract with Defence, to field MUOS upgrade kits as soon as possible.
Accenture completes migration milestone for DCM project

The Department of Defence, in collaboration with Accenture, has successfully completed a major milestone in the migration of the Department’s primary data centre to a new facility in Sydney, a core outcome of the Data Centre Migration (DCM) project.

The migration is a key part of the Department’s Strategic Reform Program to consolidate data centres, and its IT environments, in an effort to deliver AUS$1.9 billion in savings over the next decade. As the Department’s primary data centre, the new Sydney facility will house core enterprise resource planning applications including payroll, human resources, finance and logistics.

“The successful completion of this significant and complex data migration project will assist the Department in realising its cost-savings goals under the Strategic Reform Program. Importantly the project will deliver Data Centre agility and IT operational effectiveness to Defence’s business critical applications including HR, finance and logistics,” Matthew Gollings, who leads Accenture’s defence business in Australia said.

The seamless data migration of the primary data centre will lead to savings on support and equipment costs, enhanced delivery of information and communication services and reduced energy consumption by the Department.

The Data Centre Migration Project is one of a number of projects Accenture is completing for the Australian Department of Defence. Accenture was recently awarded a five-year contract as the Department’s Human Resources Applications Sustainment partner, as well as a contract to complete design of a modern human resource IT capability under JP2080 Phase 2B.1 of the Department’s Defence Management Systems Improvement program.

See ADM’s upcoming February edition for more in depth information on the transfer program.

ADF’s first class support in flood crisis

In response to assistance sought in the rising flood situation in Queensland the ADF has stood up a Joint Task Force 637 under the command of Brigadier Greg Bilton, Commander of 7 Brigade based at Gallipoli Barracks, Enoggera in south-east Queensland and four Army Black Hawk aircraft and crews from Townsville.

The ADF has been supporting flood relief and emergency recovery efforts in
central Queensland, in the vicinity of Bundaberg and Maryborough to assist civilian authorities with emergency evacuation of residents.

With local health services in the city of Bundaberg affected by the floods it has been necessary to aeromedically evacuate up to 131 patients from a local hospital. To assist this, the RAAF dispatched a pair of C-130J Hercules, carrying aeromedical evacuation personnel from RAAF Bases Richmond and Williamtown, to transport patients to Brisbane.

ADM Online: Weekly News Summary

A summary of the latest news and views in the defence industry, locally and overseas. Check out our webpage for daily news updates on the ADM home page and make sure you bookmark/RSS this for a regular visit.

This week, Minister for Defence Materiel Jason Clare announced that the navy’s remaining Sea King helicopters will be sold to Aerospace Logistics (ASL).

The Air Warfare Destroyer Alliance took delivery of the first blocks from Melbourne for the second Air Warfare Destroyer, Brisbane.

Also, Boeing delivered - on schedule - the first of 10 C-17 Globemaster III airlifters for the Indian Air Force (IAF).

And, the launch of Australia’s first National Security Strategy saw mixed reactions.

International

LCS mission modules meeting requirements

The Littoral Combat Ship’s mission packages are marching toward reaching initial operational capability next year and are performing well despite some glitches with individual components that were highlighted in a recent report by the Pentagon’s top tester, LCS officials said last week.

The director of operational test and evaluation’s annual report for fiscal year 2012 noted several deficiencies in the LCS and its mission packages, including low ship survivability and unreliable guns and mine-seeking sensors. But several officials said that most of the issues had already been addressed and that LCS was meeting its requirements.

Speaking at the Surface Navy Association’s annual national symposium, program executive officer for LCS Rear Admiral Jim Murdoch said that the ship hulls are not as survivable as a destroyer or a battleship but that they meet all requirements that had been agreed upon by the Navy and the US Defence Department. He noted that the PEO was working with DOT&E to set up surrogate testing opportunities to prove ship survivability, including building chunks of the ship to ensure it can withstand fires and other types of damage—Inside Defense
First-Spanish assembled NH90 helicopter takes flight

A ceremony was held for the maiden flight of the first NH90 to be assembled by Eurocopter España at its facility in Albacete.

Following the two NH90 GSPA prototypes manufactured in Marignane (France), which are currently in Spain for the testing and certification campaign of the Spanish version, the NH90 GSPA03 will be the first helicopter to be delivered to the Spanish Army Airmobile Force (FAMET) in 2013 under the contract signed in 2006.

This represents a major milestone for Spain, which now assumes a role as a helicopter manufacturer together with its partners, France and Germany. Eurocopter España’s site in Albacete will be fully involved in the entire life cycle for these helicopters, from the design stage through to flight testing and certification, component manufacture, the final assembly line and integrated support.

The NH90 program is the first to supply all three branches of the Spanish armed forces. It will provide Spain’s military with an advanced helicopter transport system and associated technology, with Spanish participation not only in the manufacture of the helicopter itself but also in other areas such as installation of the electronic warfare systems, simulation equipment, automated test benches and engine assembly.

Rheinmetall wins order for 700 vehicle fire control units

Rheinmetall Group has received a follow-up order to supply some 700 high-performance sensors for an identical number of weapon stations destined for a variety of vehicles that will significantly enhance the self-defence capabilities of numerous different vehicles. It will also assure a substantially improved night fighting capability.

The sensor units form the central element of the electronic fire control unit in the weapon station, enabling highly effective target recognition, tracking and engagement.
In combination with remotely operated weapon stations, they let vehicle crews respond to threats without having to leave the safety of the armoured fighting compartment, potentially exposing themselves to hostile fire. Older weapon systems can only be operated with the hatch open in unprotected mode.

Mounted on vehicles such as the Fox, Boxer, Yak and Dingo, the gun-mount adaptable aiming system sets have already proven highly effective in deployed operations of the Bundeswehr.

The new amphibious armoured vehicle VBA

The Iveco – Oto Melara Consortium (CIO) and the Land Armament Directorate of the Italian Ministry of Defense have presented the new amphibious armoured vehicle Veicolo Blindato Anfibio (VBA), the latest of the famous Centauro Family.

The VBA is the only 8x8 amphibious platform able to combine the highest level of protection with an excellent navigability.

The vehicle has been developed to meet the requirements of the Italian Landing Force and it is the result of a design based on the concept of a life-support cell. It is the combination of the SUPERAV amphibious vehicle of IVECO defence vehicles and the HITFIST OWS (Overhead Remote Weapon Station) turret of OTO Melara.

The expertise of the two companies made possible the development of a vehicle characterised by high performance in strategic and tactical mobility as well as effectiveness, day and night, against static and moving targets, weight reduction unique protection against direct fire and mines/IEDs) and reduced development time and technical risk.

The VBA can carry at least 13 personnel and makes possible maritime, ship to shore and land operations. In its maritime role it has a range of more than 50 nautical miles. It is transportable with C130 and C17 aircraft and it is equipped to be totally integrated in the digitalised forces.

First F-35 student class launched

The US Air Force and prime contractor Lockheed Martin have launched the first official class of F-35A student pilots through their flight training program at Eglin Air Force Base in Florida, a long-awaited milestone for the Joint Strike Fighter program.

At the same time, the service is considering its options for providing its pilots with supplemental training as new capabilities become available on the F-35 long after they complete their relatively short instructional course.
Eglin AFB is the site of initial flight training on the F-35A for the Air Force, and eventually for international partner countries including Australia, before pilots go on to more advanced, service-specific training at another location. After years of planning, the chief of the Air Force’s training command gave his approval in December to begin F-35A training, and the first class of six pilots began going through its instructional course earlier this month.

**STOVL JSF on the ground**

The F-35 Joint Program Office (JPO) has temporarily grounded the short take-off and vertical landing (STOVL) F-35B variant following a problem with the fueldraulics system on one aircraft on 18 January. The order affects all 25 F-35B Joint Strike Fighter (JSF) aircraft currently flying at Eglin Air Force Base (AFB) in Florida, Marine Corps Air Station Yuma in Arizona, and at the Lockheed Martin production facility in Fort Worth, Texas.

Government and industry engineers are blaming three defense contractors for a “quality discrepancy” that resulted in the grounding of the Marine Corps’ F-35B variant earlier this month. The Pentagon’s F-35 program office announced it is “developing a return to flight plan” for the 25 grounded F-35Bs after determining the cause of a mechanical error that occurred January 18 aboard an aircraft prior to takeoff.

“Evidence revealed a quality discrepancy from the company that produces the fueldraulics line,” Joe DellaVedova, a spokesman for the F-35’s Pentagon program office, said in a statement. “Stratoflex, the company that produces the line, Rolls-Royce and Pratt & Whitney have instituted corrective actions to improve their quality control processes and ensure part integrity.” - Defensetech

**UK MoD development contract for advanced engine concept**

The UK Ministry of Defence (MoD) has confirmed its order for the next prototype stage of development of a revolutionary high performance, lightweight diesel engine intended for marine outboard applications on the
fast, rigid inflatable boats used by the Royal Navy (and also used by the Royal Australian Navy).

The Cox Powertrain engine concept – with many patents pending – is based on a supercharged, two-stroke diesel opposed piston architecture with Scotch Yoke crankshaft and a central injector position. This engine topology promises a power to weight ratio comparable with high performance gasoline engines, whilst delivering diesel fuel consumption and a package volume around half that of a state-of-the-art diesel engine. The engine is being developed towards the demanding operating conditions of a military application in which extreme diesel performance, light weight and small package size are critical to mission performance, and must be delivered alongside robustness and high reliability of operation.

Cox Powertrain approached Ricardo at an early stage to provide assistance both in developing the Cox engine concept and in supporting the growth and development of the business from a small start-up operation to one capable of taking the fully developed product to market. Cox Powertrain with Ricardo support, has now successfully completed the detailed design phase. This has included an intensive computer aided engineering (CAE) program using Ricardo software tools, to optimise and validate the design to an extremely high level prior to prototype manufacture.

Having concluded the design phase the new MoD contract announced this week will support Cox Powertrain and Ricardo as they pursue preparation and further development of the engine in prototype form. It is anticipated that the first fire of the engine will be carried out at Ricardo in February of this year, marking the start of the prototype development phase.

The Cox opposed piston engine concept – the original invention of the company’s founder, former F1 designer David Cox – has been the subject of fully subscribed private investment rounds raising development capital of £6.7 million, and has already attracted previous external funding from the MoD to support the accelerated development of its detailed design. The Cox engine concept is specifically designed for its intended purpose as an outboard power unit, but further variants are already under consideration for military inboard power, civilian marine applications and UAVs.

Satellite payload developer ITT Exelis is working with the USAF Research Lab to shrink the size of the Global Positioning System’s navigation payload - an effort to make it more efficient to manufacture and launch.

AFRL awarded the company a $2 million contract in late November to conduct an 18-month study of the development of a small navigation satellite (NAVSAT) payload that would supplement the existing GPS constellation to provide coverage to ‘disadvantaged users’ in constrained environments - particularly the mountainous and cavernous regions in the Middle East.
The opportunity to augment its satellite programs with smaller, more flexible payloads is one Air Force officials have said the service is currently exploring as an alternative to today’s complex and layered satellite architectures.

Ted Skopak, Exelis’ director of strategic growth for positioning, navigation and timing, said work on the study is gaining momentum this month as the company meets with AFRL to establish technological baselines and determine the program’s parameters. The goal is to take the GPS III navigation payload - which Exelis is producing - and make it more affordable and more capable.

**Elbit awarded Israel contract to develop advanced UAS features**

Elbit Systems has received an approximately US$35 million contract from the Israel Ministry of Defense (IMOD) for the development of advanced features for Unmanned Aircraft Systems (UAS) to be supplied within three years. One of the mission requirements is the quick re-configuration of the UAS’ payloads.

The contract is in addition to contracts, awarded by the IMOD, for the supply of Hermes 900 UAS and maintenance services that were announced by the company in 2012.

**Royal Navy Wildcat helicopter takes flight**

The first Wildcat attack helicopter to be delivered to the Royal Navy has successfully completed its first flight at Yeovil in Somerset on January 28, 2013. The aircraft fleet will provide anti-surface warfare, force protection and counter-piracy capabilities for the Royal Navy. It will also fulfil an anti-submarine role when it enters service from 2015.

The UK Ministry of Defence (MoD) signed a EU$250m contract with AgustaWestland in 2012 to provide support and training for the Royal Navy and British Army’s 62 strong
fleet of Wildcat helicopters. The Royal Navy will receive 28 maritime attack variant helicopters, which will begin operations across the globe from 2015 and replace the existing Lynx Mark 8.

The Helicopter Maritime Attack (HMA) Wildcat helicopter has a more powerful engine than its predecessor, allowing it to be flown in extreme conditions all year round. It is also equipped with a more robust fuselage, a high tech interactive display and a new radar system that provides 360 degree surveillance. For armament, the aircraft will carry Sting Ray torpedoes, a door-mounted 0.5 inch heavy machine gun and new light and heavy variants of the Future Anti-Surface Guided Weapon Missiles.

“As a ship-borne helicopter, Wildcat will provide commanders with a flexible attack capability which can be deployed to tackle a range of threats at sea and from the sea,” Chief of Naval Staff, Admiral Sir Mark Stanhope, said. “With state of the art sensors, equipment and weapons, it will be an outstanding asset that will maintain Royal Naval units at the cutting edge of worldwide maritime operations.”

**Record turnover and boost in order intake in 2012**

Eurocopter has delivered another strong performance in 2012, with an all-time record turnover of €6.3 billion. The company’s second high record in bookings value marks a return to pre-crisis levels.

This places Eurocopter in a strong position to benefit from its broad helicopter portfolio evolution, along with the expansion in services and a growing global footprint.

In the military sector, some of the 2012 highlights include Eurocopter’s delivery of the initial NH90 TTH Tactical Transport Helicopter qualified in the Final Operational Configuration, received by the French and Belgian Armies; and the first final-configuration “Step B” version of the NH90 NFH NATO Fregat Helicopter, delivered to the Netherlands and the French Navy. Four German Army Tiger support helicopters were deployed to Afghanistan in the ASGARD (Afghanistan Stabilisation German Army Rapid Deployment) version, and Germany received an on-time delivery of the NH90 TTH in its medical evacuation configuration for deployment in Afghanistan in 2013; while five Italian Army Aviation NH90 TTHs were positioned in Afghanistan during 2012.

Eurocopter’s focus on services also paid off last year, with key milestones including the installation of five new full-flight simulators, bringing the worldwide total to 20; establishment of an engine maintenance training centre in Mexico with Turbomeca; an extension of the logistics and MRO (maintenance, repair and overhaul) network with an oil and gas industry support centre opened in Perth, Australia; the expansion of global helicopter maintenance capabilities; and improvement of the Eurocopter Japan affiliate’s capacity with a brand new facility at Kobe Airport.

Major helicopter upgrade milestones in 2012 were Eurocopter’s initial delivery of the mission-enhanced Puma Mk2 to the UK Ministry of Defence, and handover of the first improved CH-53GA for the German armed forces.
FORTHCOMING EVENTS

For a full list of defence and industry events, head to ADM’s online events page at www.australiandefence.com.au

ADM2013: 10th Annual ADM Defence/Industry Congress

DATE: 12 – 13 February 2013, Hyatt Hotel, Canberra
ENQUIRIES: ADM Events - Jamie Burrage, Ph: 02 9080 4321; Email: Jamie.burrage@informa.com.au Web: www.admevents.com.au

The annual ADM Congress has evolved into a pivotal event in the Defence calendar, attracting senior officials from all areas of the Defence Force and Defence Industry. It is a critical forum for any organisation operating within the defence business sector. Also do not miss the ADM Awards Dinner. The dinner is the perfect opportunity for you to continue networking with colleagues and new contacts made at the Congress. More details to be released closer to the date

Avalon 2013: Australian International Airshow and Aerospace & Defence Exposition

DATE: 26 February - 03 March 2013, Avalon Airport, Geelong
ENQUIRIES: Aerospace Maritime Defence Association Ph 03 5282 0500; Email: airshow@amda.com.au; Web: http://www.airshow.net.au

The Australian International Airshow and Aerospace & Defence Exposition is the essential aviation, aerospace and defence event for the Asia Pacific. Industry-only trade sessions will be held Tuesday to Thursday (all day) and Friday will be both a trade and public day. The exposition will open each day from 9am until 5pm. Associated industry and technology conferences, seminars and symposia will be held at Avalon and in Melbourne and Geelong during show week.

International Maritime Security Conference

DATE: 14-16 May 2013, Changi, Singapore
ENQUIRIES: More details to be released closer to the date.
IMDEX Asia Web: http://www.imdexasia.com/index.aspx
IMSC 2013 will bring together Navy Chiefs, Coast Guard Directors-General and academia around the world to discuss threats to maritime security and safety, as well as develop frameworks and solutions to deal with the security challenges that threaten and disrupt sea lines of communication.

ADM Cyber Security Conference

DATE: 12-13 June, 2013, Hotel Realm, Canberra
ENQUIRIES: ADM Events - Jamie Burrage, Ph: 02 9080 4321; Email: Jamie.burrage@informa.com.au Web: www.admevents.com.au
ADM’s 3rd Cyber Security Summit will see stakeholders from Australia’s Defence and National Security agencies address the current and emerging cyber threats to Australia’s security. More details to be released closer to the date