AAI’s Aerosonde Australia to train Shadow operators

Defence Materiel Minister Jason Clare last month announced the signing of a $7.2 million five-year contract to provide Australian-based training for the operators and maintainers of the Shadow 200 Tactical Unmanned Aerial System acquired under JP 129.

Training will begin in Queensland in April 2013. Troops will train using Australia’s second Shadow 200 system which was delivered 12 months ahead of schedule in April 2012.

The Shadow 200 unmanned aerial system captures full motion video during both day and night operations which can be sent back to a ground control station up to 125 kilometres away. It can recognise targets on the ground while operating at an altitude of up to 8000 feet.

Two Shadow 200 Systems, each comprising five aircraft, ground control stations, a launch and recovery element, and associated equipment, logistics and training were acquired at a total cost of over $90 million. The first system began operations in Afghanistan earlier this year, providing enhanced intelligence capability to the ISAF.

The training will be delivered through AAI Corporation’s Australian-based subsidiary Aerosonde Pty Ltd which will initially provide three training instructors, increasing to the full contracted requirement of six as Australian instructors gain experience.
ITT Exelis to acquire C4i

ITT Exelis has signed a definitive agreement to acquire Australian C4i Pty Ltd, from the Longreach Group Limited for an enterprise value of approximately USD$16.8 million.

Pending Longreach Group shareholder approval, the transaction is expected to close in the first quarter of 2013 subject to customary closing conditions and regulatory approvals.

C4i provides communications software for air traffic management systems and mobile communications solutions. Its Internet Protocol (IP) based voice control and switching solutions allow for large networks of radio devices to be seamlessly integrated.

Kraken awarded AquaPix contract by DSTO

Kraken Sonar Systems has been awarded a contract for an AquaPix Interferometric Synthetic Aperture Sonar system by the Defence Science and Technology Organisation (DSTO).

Kraken’s AquaPix Interferometric Synthetic Aperture Sonar (InSaS) system provides seabed images with unprecedented image resolution and detail. The system leverages the sophisticated signal processing capabilities and unique imaging technologies of Kraken’s revolutionary INSIGHT SaS image processing software. Precision sonar imaging techniques sharpen detail and enhance the shadow definition of underwater objects. The exceptional image quality improves accuracy and increases confidence in decision-making.

AquaPix is capable of providing detailed seabed images with a constant resolution better than three centimetres out to a range of 300 metres from each side of an underwater vehicle (600 metre swath). It can also produce 3D bathymetric data with a resolution better than 25cm x 25cm while delivering depth accuracy in compliance with IHO S44 special order requirements.

The system provides cost-effective and ultra-high resolution imagery that’s ideal for mine countermeasures, Q-route surveys, wreck searches, cable/pipeline survey and a wide variety of other seabed imaging and surveillance missions.

“Customers such as DSTO require advanced sonar technology to perform increasingly complex, dataintensive seabed imaging missions,” president and CEO for Kraken Sonar, Karl Kenny said. “The AquaPix InSaS platform combines significant hardware and software engineering innovations to create an efficient and extremely effective product for leading edge technology users such as DSTO.

The AquaPix system will be delivered to DSTO via Kraken’s Australia agent, Voyager Electronics.

ADM Congress 2013

ADM Congress 2013

Date: 12-13 February 2013, Hyatt Hotel Canberra
Enquiries: Jamie Burrage, Tel: +61(2) 9080 4321;
Email: Jamie.burrage@informa.com.au
Fifth and last KC-30 tanker accepted

The fifth and last KC-30 multi role tanker transport (MRTT) aircraft has been accepted by Defence at the Airbus Military MRTT facility at Madrid in Spain. This aircraft, to be designated A39-005, is the fourth aircraft to be converted in Australia from a commercial A330 airliner to a state-of-the art military tanker by Qantas Defence Services (QDS) at Brisbane Airport. One aircraft was modified in Spain, and remains in Spain for testing of the military avionics and boom refuelling systems.

The final aircraft completed Australian conversion in July 2012 before being flown to Europe by Airbus Military to undergo painting and final preparation for delivery. The aircraft will now be flown back by an all Australian crew to its home base at No. 33 Squadron at RAAF Base Amberley. The excellent performance of the aircraft and crews at the recent Pitch Black exercises in Darwin has shown the good progress that has been made on the KC-30As.

Australia is the lead customer of the MRTT aircraft which integrates a new Advanced Refuelling Boom System and pod based hose and drogue refuelling system into a commercial Airbus A330 to create the world’s most advanced tanker aircraft.

725 Squadron to train Navy’s MH-60R operators

725 Squadron will form as the operational training squadron, while 816 Squadron, which currently operates the S-70-B2 Seahawk, will transition to the MH-60R as the operational support squadron.

In June 2011, the government announced that 24 MH-60R Romeo naval combat helicopters and supporting systems would be acquired under Project Air 9000 Phase 8.

The designation 725 Squadron has been chosen as it has long lineage of helicopter and anti-submarine operations and training. The Squadron was last decommissioned on December 27, 1975.
CAE Australia is to provide King Air 350 simulator training services in Sale, Victoria where the company will establish a full-flight simulator of the King Air 350 operated by the RAAF and used to train students for low-level tactical fast-jet operations and maritime surveillance operations.

The CAE contract, worth $14.2 million, will provide over 1,500 simulator hours each year through to the planned withdrawal of the King Air 350 in mid-2018.

CAE will also build the facility to house the simulator and provide training which is currently undertaken in the US at CAE’s Dallas Simuflite Training Centre because of a lack of such a facility in Australia. The simulator will be used by the RAAF’s No. 32 Squadron and the School of Aviation Warfare to train pilots, air combat officers and Royal Australian Navy observers at RAAF Base East Sale. The simulator and facility will be owned and operated by CAE Australia.

Indra a contender for tactical routers for RAAF controllers?

While Air 5397, the Australian Military Airspace Control Communications System (AMACCS), ponders the introduction of IP-based air-ground-air (AGA) communications it appears that the RAAF’s Airspace Controller teams are to receive tactical communications routers with VoIP capability from Indra of Spain under a recent contract signed with the CoA. The project will last until 2014 and is scoped to deliver six systems.

Indra will provide a ruggedised, encrypted red/black, Tactical Communication Router (TCR) which will provide interoperability and connectivity to existing communications infrastructure as well as tactical Ground-Ground and Air-Ground-Air voice communications networks. These characteristics, as well as its innovative design, make this one of the most advanced and capable communication routing systems in the world.

The company said its Tactical Communication Router will provide maximum operational flexibility by utilising modular configuration concepts and will be capable of rapid deployment to provide communication services to Single Service, Joint or Coalition forces whilst deployed within Australia or throughout the world.

The system is based on Indra’s commercially available Digital Voice Communication...
and Control SDC-2000 which provides a redundant architecture with proven design and components to provide outstanding reliability and availability.

Indra said this technology offers the Australian Defence Force a quantum-leap in safety and efficiency for the provision and manipulation of tactical communications in the international missions through the use of advanced switching technology that adeptly manages both analogue and digital signal interfaces and signalling methods and encompasses state-of-the-art VoIP capability.

New space challenge for BAE Systems and DSTO

BAE Systems and industry partners have designed, manufactured and tested hardware and software for a space-qualified GPS receiver. As part of Project Biarri in collaboration with DSTO, the receivers will be integrated into three small CubeSats that will be launched into low earth orbit.

The CubeSat bodies are just 300x100x100mm and are fitted with small deployable solar panels. Their tiny size and miniaturised sensors make them a more cost-effective and innovative option for space missions compared with larger spacecraft.

The Biarri GPS receiver is designed to measure the precise relative positions of the CubeSats in orbit. This allows researchers on the ground to determine where the satellites are at any given time.

The BAE Systems team at Edinburgh Parks conducted successful electromagnetic, thermal and vibration testing of the GPS receiver engineering model this year. These projects are an important part of the company’s strategy to develop space capability that will address Defence’s future requirements.

The three Biarri CubeSats are set for launch by the US Government in late 2014 and will be tracked using ground stations in Australia and overseas.

RPC recipient of Engineers Australia Engineering Excellence Award in Canberra

RPC has been awarded the prestigious Engineering Excellence Award at the Engineers Australia National Engineering Excellence awards night held in Canberra on November 20, 2012.

This award was received for the work that RPC (jointly with ATSA, e3K and EET) carried out to design and manufacture the prototype of the SeaUrchin Tidal Turbine Generator 2kW.
Minister’s Achievement award for Cato

DSTO scientist Dr Doug Cato has been awarded the 2012 Minister’s Achievement Award in Defence Science for his work in underwater acoustics and marine mammal communication.

The award recognises Dr Cato’s contribution to the Royal Australian Navy through providing specialist environmental advice that enables management of the impacts of underwater sound on marine mammals, especially whales.

The Minister’s achievement award has been presented annually since 1988 to a DSTO scientist who has made an outstanding scientific contribution to enhance Defence effectiveness and efficiency.

2012 Top 40 Defence Contractors and Top 20 SME list

ADM has once again released its annual Top 40 Defence Contractors and Top 20 SME survey for 2012.

Available in the latest edition December 2012/January 2013 (available here) the survey is an important indicator of the value of Australia’s defence industry to the overall economy. Premium subscribers (if you’re reading this in Defence Week Premium, that’s you) are able to view the whole magazine online here.

Recent Books of Interest from ADM

Click here for recent titles from a broad range of publishers, both local and overseas. This digital Books of Interest edition is a supplement to our Books of Interest pages in Australian Defence Magazine (ADM) every month. There continue to be many titles published under the general heading of military non-fiction. We feature the best of these in ADM but with space in the magazine at a premium, we can’t always include all titles we receive for review, so from time to time we publish an additional digital-only version. Let us know if you need help locating a particular title you are interested in.
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, the Air Warfare Destroyer Alliance received the first major deliveries for this year of equipment to be installed on the three new destroyers being constructed at Techport Australia for the Royal Australian Navy.

The Chief of Air Force Air Marshal Geoff Brown welcomed the re-establishment of No.35 Squadron at RAAF Base Richmond.

The Maritime Business Unit secured $130 million of additional work – $65 million for the Anti-Ship Missile Defence Follow On (ASMD FON) project and $65 million in equipment and all crew training for the Landing Helicopter Dock.

Sensor improvement to boost performance of the Nulka Active Missile Decoy was given the green light.

International

UK MOD Major Projects Report 2012

The UK’s National Audit Office report gives a progress review of the 16 largest defence projects*, shows that in the last year there has been a total forecast slippage of 139 months and increase in costs of £468 million.

This means that, since the projects were approved, costs have increased by £6.6 billion (around 12 per cent more than the planned cost) and the projects have been delayed by 468 months, taking almost a third longer than originally expected.

In some cases, such as fuel price inflation of £336 million on the Future Strategic Tanker Aircraft, MOD has only limited control. On the Queen Elizabeth aircraft carrier, cost growth is due to MOD and industry having greater understanding of the costs and not being able to fully deliver agreed cost reduction opportunities. It would be unrealistic to expect MOD and industry to identify every risk at the start of technically challenging projects. However, the continuing problems indicate that MOD has more to learn from historic performance and, in particular, set realistic timescales, although it believes it has started to do so in some cases.

The MOD is accepting the capability risk and some wider costs resulting from these project delays and is having to make difficult decisions about long-term capabilities. For example, the version of the Falcon communications system being developed for use in Afghanistan, at a cost of £32 million, will now not be deployed to theatre. This is partly owing to development delays and it means that there will need to be reliance on legacy systems for a longer period.
The MOD has made a significant investment in new and upgraded helicopters to address the shortfall identified in the NAO’s 2004 report. The MOD has spent nearly a billion pounds enhancing existing helicopters to support current operations, and has taken steps to increase the flying hours of its Chinook fleet by 30 per cent. The MOD has also spent £787 million on air transport and air-to-air refuelling aircraft to support current operations and address capability gaps, such as those caused by the previously reported delays to the A400M transport aircraft. However, capability gaps remain: at times up to 2017 there will be shortages in both air transport and air-to-air refuelling aircraft. From 2022 there will be approximately a one-third shortfall in tactical transport aircraft.

*The report covers the following projects: A400M transport aircraft; Airseeker airborne electronic surveillance; Astute; Beyond Visual Range Air-to-Air Missile (Meteor); Chinook helicopters; Complex weapons system; Falcon communications system; Future Strategic Tanker Aircraft; Joint Combat Aircraft; Lynx Wildcat; Merlin CSP helicopter update; Queen Elizabeth class aircraft carrier; Specialist armoured fighting vehicle; Type 45 destroyer; Typhoon; and the Warrior capability sustainment program.

Elbit awarded Israeli Air Force’s Flight Academy contract

Elbit Systems has been awarded two follow-on contracts by the Israeli Ministry of Defense (IMoD) for the operation and maintenance of the Israeli Air Force’s (IAF) Flight Academy trainer aircraft and helicopters.

These contracts were part of the Company’s December 31, 2012 announcement regarding contract awards by the IMoD in the aggregate amount of approximately $315 million covering several business areas.

Under the first, such contract for the IAF, which is a follow-on to a contract awarded in 2004, Elbit Systems will provide full logistics and maintenance services on a “Power by the Hour” basis for the Bell 206 (Sayfan) and operational level maintenance for cobra AH-1A (Tzefa) helicopters.

In the second contract, a follow-on to a contract awarded in 2009, Elbit Systems will supply maintenance services for the HBC (Hawker-Beechcraft) T-6 (Efroni) trainer aircraft. Both contracts will enter into effect during 2014 following
CAE has signed an agreement with the Netherlands Ministry of Defence (NLMoD) to market and sell third-party training services on a CAE-built C-130 Level D full-mission simulator.

The C-130 full-mission simulator, which CAE delivered for the Royal Netherlands Air Force (RNLAF) in 2010, is currently housed at CAE’s Amsterdam Training Centre in Hoofdorp.

In addition, CAE has signed a contract with the Royal New Zealand Air Force (RNZAF) to provide comprehensive C-130 training. The RNZAF C-130 aircrews will receive simulator instruction from CAE at the Amsterdam Training Centre, including training on the RNLAF C-130 simulator that closely matches the configuration of the RNZAF’s upgraded fleet of C-130H aircraft.

The RNZAF also trains in-country on a CAE-built C-130H flight training device, which CAE delivered to the RNZAF base in Auckland under the C-130 Life Extension Program (LEP) and is currently upgrading for the RNZAF.

The US Navy has exercised a contract option funding the construction of a 10th Joint High Speed Vessel (JHSV), as part of a 10-ship program potentially worth over US$1.6 billion. The construction contract for this vessel is valued at approximately US$166.9 million.

As prime contractor, Austal was awarded the construction contract for the first 103-metre JHSV in November 2008, with options for nine additional vessels between FY09 and FY13.

The 338-foot-long aluminium catamarans are designed to be fast, flexible and manoeuvrable even in shallow waters, making them ideal for transporting troops and equipment quickly within a theatre of operations. The ship will support the warfighter through traditional logistics missions, humanitarian support projects, disaster response and by supporting maritime law enforcement activities.

Austal chief executive officer, Andrew Bellamy, said that the award demonstrated the US Navy’s commitment to the program.

“With all ten Joint High Speed Vessels fully funded and the recent delivery of JHSV 1, Austal USA is now in a great position to focus on improving efficiency and delivering
General Dynamics Canada has been awarded a CAS$32 million contract by Northrop Grumman Corporation for key communications network technology for the NATO Alliance Ground Surveillance (AGS) program.

Under this contract, General Dynamics Canada will provide the software that will control the AGS Communications Ground Control System (CGCS). The CGCS will manage radio and satellite communications between Global Hawk unmanned aerial vehicles (UAVs) and the main operating base in Sigonella, Italy. General Dynamics Canada will also deliver ruggedized computer workstations and the Voice over Internet Protocol (VoIP) intercom systems that will enable communications between operators at the operating base and with mobile command centres.

In addition, the company will provide engineering support for the integration of its software and systems at Northrop Grumman’s facilities in the US, and at the main operating base in Italy.

The NATO AGS program, led by Northrop Grumman, is a major international procurement initiative to establish an airborne ground surveillance system, which can provide NATO commanders with a comprehensive picture of activity on the ground. It includes five Northrop Grumman high-altitude, long endurance Global Hawk UAVs, missionized to NATO requirements; Mobile Ground Command and Control Vehicles; as well as associated command and control base stations. Once deployed, the AGS system will enable NATO and its coalition partners to gather intelligence, surveillance and reconnaissance information to support military and humanitarian operations.

With its main operating base at Sigonella, NATO AGS will be co-located with the US Air Force Global Hawks and the US Navy MQ-4C Triton Broad Area Maritime Surveillance (BAMS) unmanned aircraft systems, further advancing synergies across the three programs in operational capability, lifecycle logistics and sustainment.

Development and production of the AGS program is expected to take place over the next three years, with initial operation scheduled for November 2016. General Dynamics Canada will continue to provide in-service support for the system beyond 2016.

First Eurofighter Typhoon firing trial a success

The Meteor Beyond Visual Range Air-to-Air Missile has been successfully launched from a Eurofighter Typhoon as part of the Future Enhancements Flight Test Program.

The missile was eject-launched from a rear fuselage missile station, which on Eurofighter Typhoon is semi-conformal for aircraft drag and radar signature
reduction. The missile motor was fired, providing data that will allow the missile launch envelope to be expanded.

This builds on an earlier series of flight trials, carried out by partner company BAE Systems on behalf of the Eurofighter program, where unpowered missiles were used to demonstrate safe separation on the missile.

This current package of work begins the full integration of the Meteor missile with all Eurofighter Typhoon systems.

The flight trials were conducted with integrated support from QinetiQ and MBDA at a firing range in Aberporth, Wales, December 4, 2012.

**DARPA looks to prepositioning on the seabed**

The Defense Advanced Research Projects Agency (DARPA) has seen the future of naval warfare and it’s falling upward. As part of an effort to reduce the logistics of sending equipment into trouble areas, the agency’s Upward Falling Payloads project is aimed at developing storage capsules capable of remaining on the deep seabed for years. These would contain non-lethal military assets that could be deployed on the spot years in advance and rise to the surface as needed.

Forward deploying caches of military equipment isn’t a new idea. For centuries, armies and navies have left supply dumps at strategic locations for future use, and even today the US military has equipment stored in friendly nations in case of a sudden crisis. DARPA wants to take this a step further by placing assets in the deep sea in capsules protected by ambient pressure and equipped with receivers, waiting for the signal to deploy and “fall upward” to the surface.

The purpose of these capsules is to provide the military with operational support and situational awareness by means of unmanned, distributed systems. Currently, laying down a sensor network in a remote part of the world or deploying a UAV is a major operation that can take weeks or even months to carry out – especially if the other side has started shooting. This makes underwater pre-deployment very attractive.

DARPA is interested because the deep sea provides “cheap stealth.” A capsule sitting dormant on the sea bottom is extremely difficult to detect and even harder to recover, so it’s an ideal location to forward deploy assets such as sensor packs, communication relays, electronic intelligence monitors and even unmanned aircraft—Gizmag/DARPA

**Glock pistols for British troops**

The UK MOD has signed a nine million pound contract to provide the Armed Forces with more than 25,000 new Glock sidearms. The Glock 17 Gen 4 pistol is much lighter than the current Browning pistol, and more
accurate.

The Glock 17 also has an increased magazine capacity of 17 9mm rounds, compared to 13 rounds for the Browning.

Personnel across all three Services will begin to receive the new Glock 17s in the coming weeks and troops deployed to Afghanistan will be among the first to use the new weapon. The contract with Viking Arms Ltd also includes more than 25,000 holsters.

“Pistols are vital in close combat and are a key part of a soldier’s armoury,” Warrant Officer 1 Mark Anderson, Royal Marines, who trialled the new weapon before the contract was awarded, said. “Reliable, light and easy to carry, the Glock inspires confidence and performs exceptionally well.”

The Browning GP-35 Mk. III Hi-Power, self-loading pistol chambered for 9 x 19 mm NATO, is the standard-issue service pistol of the Australian Defence Force.

Pentagon eyes future heavy-lift airships

A new Pentagon report to Congress lays out critical technology areas for enabling heavy-lift, hybrid air vehicles to become practical for military missions, but the analysis is facing scrutiny on Capitol Hill.

The Hybrid Airships Operational Concepts report contends “the ongoing technical progression in airship technologies suggests that for the first time in history heavy-lift airships are viable and could become an actual capability.” Up until now, heavy-lift airships were “largely conceptual,” states the report, sent to Congress, by the Pentagon’s research and engineering directorate.

Rigid-hull, variable-buoyancy hybrid air vehicle technology could help benefit inter- and intra-theater logistical operations, including delivering items to the point of need, as well as persistent intelligence, surveillance and reconnaissance and disaster relief missions, DOD writes. But, there are a number of critical areas that need technical development if operational heavy-lift airships are to become practical—Inside Defense

Colombia orders additional Airbus Military C295 transport

The Colombian Air Force has ordered one more Airbus Military C295 to add to the five examples already ordered for use on military transport and humanitarian aid duties.

Since accepting its first C295 in 2008 the CAF has steadily increased its fleet of the type and now operates four with two more to be delivered. It also operates six Airbus Military CN235-200s and six of the smaller C212.

This latest order brings the number of Airbus Military C295s and CN235s sold this year to 32 and takes total C295 orders to 115, with 93 currently in operation in 15 countries.
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 *** DATE CHANGE****
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.