



DEFENCE WEEK

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PUBLISHING CONTACTS:

EDITOR

Katherine Ziesing,
Tel: 02 6203 9535
Email: katherineziesing@yaffa.com.au

SENIOR CORRESPONDENT

Tom Muir,
Tel: 02 6291 0126
Email: tom.muir@home.com.au

PUBLISHING ASSISTANT

Erin Pittman,
Tel: 02 6203 9535
Email: erinpittman@yaffa.com.au

MANAGING EDITOR

Judy Hinz,
Tel: 07 3348 6966
Email: judyhinz@yaffa.com.au

SUBSCRIPTIONS

Martin Phillpott,
Tel: 02 9213 8325
Toll Free 1800 807 760
Email: martinphillpott@yaffa.com.au



Oshkosh's JLTV demo a Land 121/4 option?

Tom Muir

Oshkosh Defense says that it has successfully demonstrated its Joint Light Tactical Vehicle (JLTV) prototypes at an event hosted by the US JLTV Joint Program Office in Quantico, VA.

During the demonstration, the Oshkosh JLTV prototypes completed the US military's severe off-road track (SORT) without fail, allowing military and congressional leaders to observe and experience a new generation of light vehicle mobility and protection.

As one of three funded participants in the 27 month JLTV Engineering, Manufacturing and Development (EMD) phase, (the others were **AM General** and **Lockheed Martin Corporation**) Oshkosh has completed manufacturing its 22 JLTV prototypes, to be delivered in August, including both the 4-door multi-purpose variant and the 2-door utility variant, to be delivered in August.

According to Oshkosh their JLTV solution, named the **Light Combat Tactical All-Terrain Vehicle (L-ATV)**, delivers the latest automotive technologies and an advanced crew protection system to achieve JLTV performance at an affordable price. The Oshkosh L-ATV meets or exceeds the current JLTV requirements – with room for future growth. Question: is this vehicle a possible contender against the **Thales Hawkei** for the Land 121 Phase 4 US JLTV option?

As readers will know Land 121 Phase 4 will provide the core of the ADF operationally deployable light protected vehicle fleet through the acquisition of around 1300 vehicles and trailers. To acquire this capability Defence is pursuing the following multiple acquisition options:





Manufactured and Supported in Australia (MSA) Option: In 2011, Government approved the selection of Thales Hawkei as the preferred vehicle to continue further development and testing, including the manufacture of prototype vehicles (since delivered) under Stage 2 of the MSA option. Subject to successful testing of the vehicles, final Government approval of the project is expected in 2015, and

production work could potentially commence in Australia as early as 2016.

Joint Light Tactical Vehicle (JLTV) Option: Australia's participation in the Technology Development Phase of the US Department of Defense JLTV Program, ended in June 2012. Australian participation in the technology development phase, which commenced in January 2009, finally resulted in the delivery of three right hand operation (RHO) prototypes from each of the three JLTV contenders (**GTV, Lockheed Martin** and **BAE Systems**) which underwent reliability, maintainability and ballistic testing by the Australian Army at Monegeetta, Victoria. The tests culminated with user evaluations in early 2011. Australia's participation cost \$40 million, which included the cost and trialling of the AU prototypes.

Now Defence says it will continue to monitor progress of the US JLTV program, however, no additional funding commitments have been made at this stage. According to the latest DCP further participation in the US JLTV program is subject to Government's decision on the MSA option which suggests that there remains some Australian interest in the outcome of the JLTV's EMD phase as a possible, but unlikely, fallback position should the Hawkei fail at the final hurdle.



Collins ship control upgrade

Tom Muir

The government has announced further initiatives to both maintain the capability of the Collins Class submarine fleet and further improve the submarines' maintenance, sustainment and availability.

A Service Life Evaluation Program was undertaken by Defence in 2012 to identify any issues that would prevent the Class from achieving their indicative service life. The study also considered the possibility of

a service life extension for the Collins fleet.

The study found there was no single technical issue that would fundamentally prevent the Collins Class submarines from achieving their indicative service life or a service life extension of one operating cycle for the fleet, which is currently around seven years,



excluding docking periods. Based on the commissioning dates of the submarines, this provides an indicative service life of the fleet of 2031 to 2038.

Combined Pass approval has been provided for the first stage of **Sea 1439 Phase 3.1 Collins Obsolescence Management** to resolve obsolescence in the **Integrated Ship Control Management and Monitoring System (ISCMMS)** in the Collins Class submarine fleet, which was designed in the 1980s to control, manage and monitor essential Collins Class submarine functions such as manoeuvring, power and life-support. A highly automated computerised system it enables the crew of the Collins Class to control, monitor and manage the large number of diverse and complex systems on board the submarines.

The ISCMMS System has performed effectively and reliably since the Collins class entered service in the 1990s. However, it is essential to ensure the system can be maintained for the remaining indicative extended service life of the Collins Class fleet.

ASC Pty Ltd will work with **Saab Systems** to engineer replacements for obsolescent system components and update and test the system in on-shore test facilities and subsequently one Collins Class submarine. This first stage work is valued at around \$65 million and will be conducted at ASC in Adelaide in South Australia.

The Government has also given approval for Defence to plan for the second stage of the project to update the system in the remaining five Collins Class submarines once installation and testing in the first submarine has been completed. Government consideration of the second stage is scheduled for 2017.



Collins full cycle docking reduced to two years

Tom Muir

The government also announced a major reform in the maintenance of the Collins Class submarine fleet, to improve submarine availability across the fleet of six submarines by reducing the planned full cycle docking period for each submarine from three years to two years.

A key recommendation of the **Coles Review** was that a reduction in the duration of planned maintenance for the Collins class would make the largest single contribution to a higher level of submarine availability. Under the current Collins maintenance cycle, each submarine operates in-service for eight years (including intermediate dockings) followed by a planned three



year full cycle docking. The in-service period is punctuated by shorter intermediate duration dockings and maintenance periods alongside.

This means that two submarines are in full cycle docking at any one time, with, in general terms, one and sometimes two in shorter dockings and maintenance. This means Defence can currently plan on having two and sometimes three submarines available to the Fleet Commander for tasking at any one time.

The Coles Review proposed transition to a 'single stream full cycle docking' involving 10 years of in-service operation followed by a two year full cycle docking. While the new in-service 10-year period will include longer intermediate docking periods to account for the reduction in full cycle docking duration, the result would be a consistently higher level of availability overall, extending the duration of operational periods. Over the long term, the 'single stream full cycle docking' means that Defence can plan on having three and sometimes four submarines available to the Fleet Commander for tasking at any one time from 2016-17.

ASC has proposed an immediate transition beginning with *HMAS Farncomb* in mid-2014. ASC has assessed that the immediate transition proposal lowers the risks associated with the progressive transition suggested by the Coles Review, particularly risks related to funding requirements, the time required to re-allocate labour, workscope adjustments, and managing the overall program to deliver availability. The government has agreed to ASC's recommendation.

Under the immediate transition, *HMAS Collins*, which is currently undergoing pre-full cycle docking preparation in Adelaide, will remain in Adelaide until completing full cycle docking in mid-2018. During this period, all pre-full cycle docking preparation on *HMAS Collins*, including remediation of a class-wide main motor defect, will be completed. *HMAS Collins* will commence her two-year full cycle docking in 2016.

Defence will closely monitor ASC's implementation of the new full cycle docking maintenance regime and provide regular reports to Government.



DMO's Land Systems reviewed

The review into Land System Division is the first of a series of reviews into the structure and functions of the Divisions within DMO which manage capability projects to establish the optimal structure for these Divisions

to drive improved performance, accountability and reporting in relation to projects.

The reviews were commissioned following the identification of a number of projects that have not been managed as effectively as they should have been. The reviews began with a structural review into Land Systems Division, which has responsibility for a number of problem projects, including: **Land 106, M113 upgrade; Land 112, ASLAV upgrade; Land 144/1 Countermine Capability; Land 134/1- Combat Training Centre – Live Instrumented System; and Land 40/2 Direct Fire Support Weapon – Lightweight Automatic Grenade Launcher.**

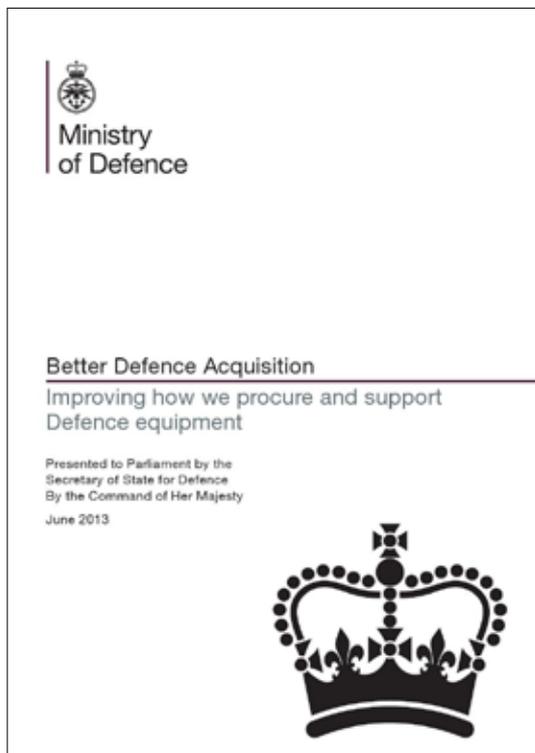


Ernst & Young undertook the review which assessed Land Systems Division across the areas of structure, resource, capability, roles, process, governance, infrastructure, culture, performance and talent management. Their review made 41 recommendations with key findings being the need to enhance accountability within Land Systems Division by improving performance reporting, empowering decision making at the delegated levels and strengthening performance reviews.

The review also found a need to increase staff capability to provide accurate, complete, timely and well supported advice to Government by improving training programs. Other findings include a requirement for all senior leadership group positions to be contestable to ensure the most suitable candidate is appointed to leadership roles whether that candidate is an ADF member or a civilian.

Defence agreed with the recommendations of the report and says an implementation plan to address and action the 41 recommendations is currently being developed.

The executive summary and recommendations of the Ernst & Young review into Land Systems Division will be available [here](#).



UK MOD procurement also needs improvement

Tom Muir

It seems that the DMO is not alone in its procurement and project management difficulties that have necessitated reviews, such as the foregoing on Ernst & Young's review of the DMO's Land Systems Division.

In his introduction to the June 2013 release of the UK Ministry of Defence's white paper, ***Better Defence Acquisition Improving how we procure and support Defence equipment***, the Secretary of State for Defence, **Philip Hammond**, said that for at least the last 20 years the UK's defence equipment program had suffered

from waste and cost overruns. Equipment has been delivered late and to a specification that has not always met the requirements of our Armed Forces.

"That is why I have made it my priority to establish a fully costed and deliverable ten year equipment program. This has necessitated hard choices. But it has now been achieved and for the first time in decades the Armed Forces have certainty that the equipment they need has been planned for and properly funded.

"Great progress has already been made, but if we are to maintain a balanced budget and continue to provide a better service to the front-line, we must make real changes to our Defence Acquisition systems – tinkering at the edges is not enough. My Department has therefore considered carefully the options available and subjected



these to detailed analysis. As a result, this White Paper sets out proposals for two major changes:

1. Creating a new **Government-Owned Contractor Operated (GOCO)** operating model to manage the procurement and support of defence equipment by the **Defence Equipment and Support** organisation as the Agent of the MOD, subject Better Defence Acquisition: Improving how we procure and support Defence equipment to demonstrating affordability and value for money. This will bring in incentivised private sector expertise to improve the delivery of the MOD's equipment program by introducing systems and ways of working that provide staff with the best access to the necessary skills, processes and tools to enable them to do their jobs better, driving value for money in equipment projects.

2. Creating a new statutory framework to ensure transparency and to encourage efficiency in single-source procurement contracts. This will provide an assurance that value for money is being obtained for the taxpayer in this significant area of MOD business.

This White Paper sets out the background to the proposed changes both to the structure of DE&S, and to the single-source procurement regime, and the legislative requirements that will be needed to make those changes operational.

The Defence Transformation initiatives have addressed significant areas of this challenge, including the delivery of a balanced, if taut, MOD budget. However, this work does not address the underlying issues which cause under performance in Defence Acquisition. Poor specification by the Requester, a lack of understanding of cost drivers, poor initial cost estimation and poor project control by the DE&S Deliverer have all served to drive up the eventual costs of projects in the past and, uncorrected, will do so again.

A radical improvement in the ability of the whole of MOD to set requirements and deliver equipment, "right first time", is needed if the Department is to be able to continue to deliver an Equipment Program of roughly the same size and complexity, year on year with 28 per cent fewer people (the reduction required by the 2010 SDSR). Link to full report [here-TM/UK MOD](#)

Capability updates for JP 2044/4A and JP2080/2B.1

JP2044 Phase 4A

The Government has provided Combined Pass approval for Joint Project 2044 Phase 4A to upgrade and enhance the Defence's digital topographical systems to strengthen interoperability with our allies and deliver enhanced intelligence, surveillance and reconnaissance capability to the Australian Defence Force (ADF).

Geospatial Intelligence (GEOINT) is a critical input to a wide range of Australian Defence Force activities including precision strike, force manoeuvrability, intelligence and navigation. GEOINT is also a core source of information on global issues such as the proliferation of weapons of mass destruction and terrorism. GEOINT supports the activities of other government organisations, and supports special event management and crisis response activities of National and State security authorities.



Joint Project 2044 is a multi-phased project designed to develop and sustain a Defence capability to exploit GEOINT data gathered from multiple sources including space-based surveillance. Phase 4A will commence the implementation of a modernised architecture for the Australian GEOINT system. This will include the strengthening of the systems for GEOINT interoperability with our allies, upgrade of Defence's geospatial data and image repositories, enhancement of the capabilities for the exploitation of geospatial data from an increasing variety of sources and improvement of the availability of GEOINT to Defence.

Around \$90 million has been provided for this activity, with around an additional \$20 million subject to further consideration. The capability will commence operations from mid 2014.

The outcomes of this phase will provide the foundation for Phase 4B and subsequent phases to further develop the overall Australian and allied Geospatial Intelligence System's architecture and to host the expanded range of production and dissemination services.

Of the other phases of JP2044, 2A now complete, delivered system updates and conducted risk reduction activities in preparation for the main acquisition phase; and Phase 2B also complete, acquired Information Technology (IT), communications and training infrastructure to support a space-based surveillance capability. The primary opportunities for Australian industry will be in areas of supply and installation of commercial off the shelf hardware and software, provision of specialist personnel to assist with system delivery, and ongoing system support.

JP2080 Phase 2B.1

Approval has been given to Defence to proceed with the First Release build of the ADF Payroll component for **Joint Project 2080 Phase 2B.1 – Personnel Systems Modernisation**. Funding of around \$90 million has been approved for this activity. The Personnel Systems Modernisation project is a significant Defence information and communications technology project that brings together a range of human resource management reforms and activities, including major reforms in key business areas such as personnel administration, career management, education and training, workforce planning and enterprise reporting.

The First Release will integrate the ADF payroll capability into Defence's current core personnel management system which is used to pay Defence civilian employees and ADF Reservists. The outcome will provide a single, unified payroll system for the entire Australian Defence Organisation. It will also improve Defence's ability to ensure the correct and timely payment of the military and civilian workforce and will deliver efficiencies from having a single integrated payroll system. The First Release build will be operational from early 2015. The First Release also establishes the framework for follow-on releases of the Personnel Systems Modernisation project which will integrate the human resources management system within Defence into a single unified and modern Commercial off the Shelf based system. Defence will return to Government in Financial Year 2013-14 for approval for follow-on releases.

2nd annual ADM Defence Support Services Summit

Date: 19 September 2013, Hyatt Hotel, Canberra

Enquiries: Jamie Burrage, Tel: +61(2) 9080 4321;
Email: Jamie.burrage@informa.com.au



POLICY ANALYSIS ASPI

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AUSTRALIAN STRATEGIC POLICY INSTITUTE

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Something new under the Rising Sun: expanding Australia–Japan defence cooperation by Hayley Channer, Andrew Davies and Peter Jennings
3 June 2013

A number of recent policy documents signal the Australian Government's intent to deepen defence engagement in the Asia–Pacific, and future defence policy statements are likely to reinforce that objective. The *Australia in the Asian century* White Paper clearly established Asia as our primary economic and strategic focus. Australia's first National Security Strategy gave as the first of its three priorities 'strengthening regional engagement to support security', and the 2013 Defence White Paper—released in May 2013—sets out an ambitious plan to strengthen defence relations with Japan.

There are several factors working to make the strategic environment more uncertain for Australia and other countries in the Asia–Pacific. First, and more quickly than was expected, there's been the emergence of a sharper-toned China–US strategic competition. Military-to-military relations, in particular, are difficult. Second, there's a curious blending of elements of cooperation and competition in Asia–Pacific affairs. The region's tied together by economic and trade relations, but in important respects there's an absence of trust between countries, particularly on military matters. Third, a number of middle-sized powers are emerging with stronger voices on security matters, particularly Japan, South Korea, Indonesia, Vietnam, India and even Australia. Fourth, there's been a broad increase in the capabilities of many regional military forces and with it the growing risk of military incidents, particularly in the maritime domain. Taken together, these developments point to an increasingly complex region where competitive multipolarity is the defining characteristic of international engagement.

Even with an ensured American presence, because Australia's resources are limited we can't hope to achieve all of our strategic objectives in the region without engaging other players and finding innovative ways to develop a cooperative approach to building security. As the most capable of American partners in the region, Japan offers much as a closer partner to Australia. The bilateral relationship's already strong—Japan's now one of our closest Asian security partners.

Domestic factors
Recent developments in Japanese politics and defence policy have created an environment that encourages closer engagement. Japan's conservative Abe government has made the nation's defence forces a priority, with plans to increase defence spending by over A\$1 billion (the first real increase to

ASPI Publications

The following ASPI papers were released earlier this week:

Enter the Cyber Dragon: Understanding Chinese intelligence agencies' cyber capabilities

This ASPI paper by **Tobias Feakin** provides a clearer understanding of the key elements of the Chinese intelligence agencies that exploit the cyberdomain. It also shows that, while cybersecurity is a concern, much media coverage tends to oversimplify the issue and not present the public with the fuller picture.

2013 is the year that cyber issues have taken on a heightened priority and strategic weight. Governments must now work out how to handle cyber matters as an element of their foreign policy to prevent long-term damage to international relationships.

Something new under the Rising Sun: expanding Australia–Japan defence cooperation

This ASPI paper by **Hayley Channer, Andrew Davies** and **Peter Jennings** notes

that a number of recent policy documents signal the Australian Government's intent to deepen defence engagement in the Asia–Pacific. This paper considers current defence relations between Australia and Japan and looks at reasons and opportunities for increased engagement and cooperation, including in the areas of submarines, AirSea Battle and computer network operations.

These reports can be downloaded from www.aspi.org.au



Movement at the station

Rafael Advanced Defense Systems has appointed Brigadier General (ret.) Yitzhak Gat as the company's new Chairman of its Board of Directors.

Gat's professional background includes a series of senior positions in Israel's defense establishment and industry, including commander of the Ramat David Air Force base, Head of Materiel in the Israeli Air force, CEO of **Rafael** (1992-1998), CEO of **Elisra**, among others.

Defence's **Simulation Branch** has welcomed **CDRE Charles McHardie RAN** to the Branch as their new Director General.





ADM Online: Weekly 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, ETU and AMWU health and safety reps called for a cease work on the RAN helicopter landing ship **NUSHIP Canberra** until a full investigation and audit has been completed on unterminated cables on board the ship that have been energised.

A scientific analysis of commercial **water** filters could help reduce the amount of water Australian Defence Force (ADF) soldiers have to carry and ease logistical burdens associated with resupply.

Australia and the US agreed to progress to a larger six month **rotation** of around 1,150 US Marines to northern Australia from 2014.

And, a computer-generated animation was released highlighting the multi-mission capability of the three naval destroyers being built as part of the **Air Warfare Destroyer Project**.



International

ITT Exelis lands \$42 million Aireon contract

ITT Exelis has been awarded a \$42 million contract by Aireon LLC to provide the Automatic Dependent Surveillance-Broadcast (ADS-B) data processing and distribution component for its global space-based air traffic surveillance system.

Aireon, a joint venture between **Iridium Communications Inc.** and **NAV CANADA**, will take advantage of the hosted payload space on **Iridium NEXT**, Iridium's second-generation satellite constellation, to enable fully global and continuous space-based

monitoring and control of aircraft. Exelis will design and build the data processing and distribution platform, a critical component of the **Aireon system**, and will operate and maintain the system for 15 years from first launch. This contract further extends the ongoing relationship between Aireon and Exelis, which also provides systems engineering services for Aireon.

Aireon's space-based ADS-B solution will enable air traffic controllers to safely grant pilots more efficient flight levels and direct routing where ground-based surveillance infrastructure cannot be deployed cost-effectively. Air traffic surveillance will be available globally to Air Navigation Service Providers (ANSPs), including over oceans and remote regions where such surveillance is not currently possible.

Exelis will reliably distribute the ADS-B data to multiple air traffic control facilities of any ANSP worldwide that is interested in purchasing surveillance data subscription services from Aireon. Through this contract, Exelis will ensure that Aireon's service seamlessly integrates with and extends existing ground-based services, setting a foundational building block for a globally harmonized space-based air traffic management system.

Exelis is in the running here in Australia for the **One Sky program** which will see civil and military air traffic management systems combined.



UK: Supacat and Navistar sign protected mobility MoU

Supacat and Navistar Defence have signed a Memorandum of Understanding to form a team to deliver collaborative future

support to the UK Ministry of Defence's protected mobility fleet.

Partnering together enables the two support service suppliers to integrate their existing Urgent Operational Requirement (UOR) based support structures to enhance combined capabilities on offers as vehicles are brought back from Afghanistan into the Army 2020 core fleet. This alliance allows the two OEMs to start preparing for a "Strategic Support Supplier," (SSS) type support arrangement to enable the UK MoD to adopt industry-led solutions for managing fleet support and achieving efficiencies.

Supacat and Navistar will take advantage of the geographical spread of their combined facilities to evolve the integrated joint support solution— delivering efficiencies to the UK MoD across both companies' vehicle platforms.

The UK MoD recently confirmed Supacat's **Jackal** and **Coyote** platforms and Navistar's **MXT Husky** will be brought into the core fleet to form part of the British Armed Force's equipment plan for the next 10-15 years. Under the MoU, Supacat and Navistar would have the capability to cover nearly 1,000 total vehicles in service delivered under numerous UORs to the UK MoD through the UK Defence Equipment and Support's (DE&S) **Protected Mobility Team (PMT)**.





Rheinmetall receives major order

Rheinmetall has received an order to supply an Arab customer vital subsystems and services for state-of-the-art main battle tanks and artillery systems.

Just awarded, the total order is worth around €475 million. Under the contract, delivery will take place progressively during the 2015-2018 timeframe.

Specifically, Rheinmetall will be supplying complete **L55-type tank guns** for over 60 **Leopard 2A7 main battle tanks**, together with fire control electronics and electro-optical sensors for the medium-calibre weapon station.

In addition, Rheinmetall will manufacture the chassis and L52 main armament for over 20 **PzH 2000 self-propelled howitzers**, as well as supplying a complete driver training vehicle.

Rheinmetall Group will also be responsible for a spare parts package and special tools as well as training and documentation services.

The order also encompasses 120mm ammunition for the Leopard and 155mm ammunition for the PzH 2000 in multiple variants, together with MTLs modular propelling charges for the artillery system.



Elbit Systems' Elisra launched

Elbit Systems EW and Sigint – Elisra will launch, at the Paris Air Show, a self protection Electronic Warfare (EW) system, well suited for Unmanned Aircraft Systems (UAS).

Improving the UAS' survivability, the **SPS-65V5** system is based on Elbit

Systems EW Elisra vast experience in the development of systems installed onboard other platforms such as fighters, helicopters and utility aircraft, already in operational use by the Israeli Air Force and other customers worldwide.





“The increased global use of UAS is accompanied by a growing demand for survivability capabilities for these platforms, enabling protection of both the mission and the platform itself, as well as the unique and valuable sensors carried onboard,” **Edgar Maimon**, General Manager of Elisra, commented. “The range of sensors included in this new protection system will also contribute to and enhance the UAS’ intelligence gathering capabilities.”

The UAS Self Protection system is based on the modular SPS65-V5, allowing for the addition/removal of capabilities based on the operational requirements set by the user and mission restrictions. The system is adjusted to UAS use in terms of Size, Weight and Power (SWaP) and it can be installed onboard a variety of UAS platforms, ranging from tactical to HALE.



Bell Boeing awarded V-22 Osprey contract

The Bell Boeing V-22 Program, a strategic alliance between Bell Helicopter Textron and Boeing, has been awarded a five-year US Naval Air Systems Command (NAVAIR) contract for the

production and delivery of 99 V-22 Osprey tiltrotor aircraft, including 92 MV-22 models for the US Marine Corps and seven CV-22 models for the US Air Force Special Operations Command.

Valued at approximately \$US6.5 billion, the contract is structured to provide nearly \$US1 billion in savings to the US government compared with procurements through single-year contracts. The contract also includes a provision permitting NAVAIR to order up to 23 additional aircraft.



DARPA improves Close Air Support

DARPA’s Persistent Close Air Support (PCAS) program is an all-digital system that lets joint tactical air controllers, such as Australian Forward Observers/JTACS, call up CAS from a variety



of sources, such as aircraft or missile platforms, to engage multiple, moving and simultaneous targets.

DARPA describes PCAS as a “system of systems” that uses commercial IT products and models such as open interfaces, element modularity and mobile software applications. Generally, it consists of manned and unmanned aircraft, next generation graphical user interfaces, data links, digital guidance and control, and advanced targeting and visualisation tools. In practice, it breaks down into two major component systems.

The first is PCAS-Air, which as the name suggests, deals with airborne assets. It involves the use of internal guidance systems, weapons and engagement management systems, and communications using either the Ethernet or aircraft networks for high-speed data transmission and reception. PCAS-Air processes the data received, and provides aircrews via aircraft displays or tablets with the best travel routes to the target, which weapons to use, and how best to use them.

The other half is PCAS-Ground, intended for improved mobility, situational awareness and communications for fire coordination. Soldiers on the ground can use an HUD eyepiece wired to a tablet that displays tactical imagery, maps, digital terrain elevation data, and other information. This means they can receive tactical data from PCAS without having to keep looking at a computer screen. Coordination with airborne pilots is achieved through in-flight GPS tracking-TM/DARPA



MBDA's Brimstone destroys multiple attack craft

MBDA's combat proven, UK developed, Brimstone missile carried out the world's first surface to surface salvo engagement of multiple Fast In-shore Attack Craft (FIAC) threats with a single button push.

The success of the trial has shown Brimstone's unrivalled ability to swiftly strike numerous individual vessels without the need to laboriously designate each target, thereby demonstrating its prowess as a fire and forget maritime surface attack weapon.

On the 29th May 2013, three millimetric wave operational Brimstone missiles were launched in a rapid salvo of less than a second against a simulated attack formation of five representative FIACs. The three missiles independently acquired and engaged their respective targets at a distance between 4km and 5km (constrained by range safety); direct hits resulted in extensive structural damage to the three leading vessels, including one travelling at around 20 knots. The missiles were launched from a surface trials platform using a Brimstone triple rail launcher in conditions of sea state 3.

This exceptional achievement follows on from a previously undisclosed, successful surface launch trial against a single static FIAC on the 6th April 2013. Instead of a warhead the missile carried a telemetry unit to transmit trials data. The missile acquired and identified the target with a subsequent direct hit on the vessel's control cabin, with



the missile passing through the hull at the rear of the craft causing the target to sink.

The Brimstone program is run by MBDA UK's team in Stevenage, Hertfordshire while both of these trials were carried out off the west coast of Scotland with range support provided by **QinetiQ**.

Brimstone is being proposed by MBDA UK as a surface attack missile for deployment within the Sea Spear system against FIACs and other small surface threats in all weather environments. As an effective maritime Force Protection capability, it rapidly provides significant utility beyond the range of medium calibre naval gun systems. With a range of deck-mounted launcher options, from single to six-pack configurations, the system's very small footprint gives it a high level of deck positioning flexibility making it suitable for small vessels such as Fast Attack Craft as well as much larger vessels such as auxiliary ships.

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FORTHCOMING EVENTS

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

DSEI

DATE: 10-13 September, 2013, ExCel, London

ENQUIRIES: Web: www.dsei.co.uk

DSEI is the largest fully integrated defence and security show in the world, featuring Air, Naval, Land and Security show content. Based in ExCel, London every two years, the event provides unrivalled access to key markets across the globe.

SimTect

DATE: 16 Sep - 19 Sep, 2013, Brisbane Convention and Exhibition Centre, Queensland

ENQUIRIES: Web: www.simtect.com.au

SimTect is the annual Simulation Technology and Training Conference held by Simulation Australia. Since its inception in 1996, SimTect has grown to become Australasia's premier simulation conference for industry, government and academia.

2nd annual ADM Defence Support Services Summit

DATE: 19 Sep, 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 Defence Support and Reform Group has an annual budget of \$3.9 billion, with an asset base in excess of \$20 billion and around 2,600 civilian and 1,100 military staff. It provides a diverse range of products and services to support over 100,000 ADF personnel and Australian Public Service (APS) employees.

Pacific 2013

DATE: 07 - 09 Oct, 2013, Sydney Convention & Exhibition Centre, Darling Harbour

ENQUIRIES: Web: www.pacific2013imc.com

Pacific 2013 IMC provides a unique opportunity for people involved in maritime and naval affairs around the world to discuss the latest maritime developments in design, naval architecture, engineering, science and technology. With the concurrent Maritime Exposition, the event will provide a meeting place for industry representatives to exchange ideas and to establish personal and business contacts.

SIA 2nd Submarine science, technology and engineering conference

DATE: 15 - 17 Oct, 2013, Adelaide

ENQUIRIES: Web: www.submarineinstitute.com/sia-conferences/

The peak event in Australia for engineering of what is one of the most complex Defence assets - conventional submarines. In addition the conference covers the full range of underwater technologies, many of which are relevant and in use for under-sea resources exploration and exploitation.

This conference also provides a national focus for shipbuilding and land-based research, development, test and evaluation and systems integration relevant to submarines.

Safeskies

DATE: 16 - 17 Oct, 2013, Hotel Realm Canberra

ENQUIRIES: Web: www.safeskiesaustralia.org

Safeskies Conferences Inc. is an Australian based not-for-profit organisation which holds a biennial aviation safety conference in Canberra. The 2013 conference has as its theme 'People and Technology', and speakers will probe some of the issues surrounding this theme, including UAVs, rotary wing aircraft developments, pilot training and automation, cabin safety, the latest technology in large passenger jets and a case study from the Air France flight 447 accident investigation. There will be speakers from the UK, USA and Europe; and from Boeing, Augusta and Cranfield University.

ADM Northern Australia Defence Summit

DATE: 29 Oct - 30 Oct, 2013, Darwin Convention Centre

ENQUIRIES: ADM Events - Jamie Burrage, Ph: 02 9080 4321;

Email: Jamie.burrage@informa.com.au

Web: www.admevents.com.au

Bringing together key figures from the NT Government, senior military figures, and senior industry representatives, this conference is all about the continuing development and support of Defence in the Top End. Hear about the current and new initiatives offered by Government and what industry can bring to support Defence's strategic objectives..

