



DEFENCE WEEK

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How close is 'imminent' on Collins programs?

Tom Muir

With an invitation to register interest (ITR) released as far back as April 2010, and first pass long since achieved, the many potential contenders for the Collins submarine communications upgrade under Sea 1439, Phase 5B2, who have been told the release of the classified RFT is imminent, may be beginning to wonder just how close imminent is?

The major element of 5B2 is the Modernised Submarine Communications System (MSMCS) which comprises the communications equipment and wide-band satellite communication capability. According to the DCP the requirement encourages a competitive tendering environment through an ITR and restricted RFT for the system with the majority of work flowing from the enhancement carried out within Australia. To enable the new communications capability to operate effectively the installation of a **Submarine LAN Environment** (SubLANE) will be required as well as an enhanced shore-based communications centre.

It would appear that the majority of companies responding to the ITR were successful and will receive the tender documentation which has been under development by Canberra-based **eValua**, an online electronic tendering and evaluation consultancy, together with **ASC** and **Booz**.

The 'successful' ITR respondents include: **Raytheon R&S; DRS Technologies; CEA; Lockheed Martin** (Australia); **Qinetiq** (Australia); **L3 Communications; Boeing; Hagenuk; Thales** (Australia); **Rafael**; and **Selex**.



Initial Operating Capability for RAAF tanker



Photo: Nigel Pittaway

The Government has announced that the KC-30A Multi Role Tanker Transport (MRTT) aircraft has reached Initial Operational Capability (IOC).

Refuelling clearance tests for the **F/A-18F Super Hornets** are now underway and are on track to be completed this year.

Further modification and testing is underway to enable the MRTT to achieve Final Operational Capability, (FOC) involving the ability to refuel the **E-7A Wedgetail**, **C-17A Globemaster**, and other MRTTs.

In the future, the MRTT will also be able to refuel the P-8A Poseidon surveillance aircraft and F-35A Joint Strike Fighter when these aircraft enter Air Force service.

Special Forces land mobility update

Tom Muir

Land Systems Division is currently preparing for the release of an RFT for the provision of Special Operations Vehicle - Support (SOV-Spt), under JP2097/1B. The RFT is expected in May 2013 and due to classified aspects of the requirement Defence has advised potential tenderers to ensure they have the appropriate security accreditations.

Project Redfin was established to ensure Special Operations Forces, including the SAS and Commandos, were suitably equipped with capability enhancements to enable them to continue to respond effectively to operational demands well beyond those of other ADF elements. A key element of **Project Redfin** has been the search for new and improved tactical and patrol vehicles for Australia's Special Forces.

Last month **Supacat** delivered the first prototype of its new special operations vehicle to the ADF following its emergence as preferred bidder to provide a prototype vehicle for the Special Operations Vehicle element of Redfin. The vehicle is the latest version of Supacat's Special Forces HMT Extenda with a high level of commonality with the Army's existing Nary HMT fleet.

But the SOV-Spt requirement is a far cry from the gung-ho Supacat and the requirement is for a very different vehicle, similar to an up-armoured Toyota Land Cruiser type with IED and RPG protection, and possibly including a remote weapons station (RWS). Designed for training and for discrete urban operations, this vehicle would be used mainly by the ADF's two Tactical Assault Groups (East and West).

The TAGs were formed within 4RAR Commando to assist civil authorities to cope with major terrorist incidents, including the potential use of chemical, biological



and radiological weapons. The TAG is trained in offensive operations in a range of environments, particularly urban, and one of the stated objectives 'is the recovery of hostages'. Terrorist action where hostages are involved is still used in an attempt to leverage terrorist demands.

The Land Cruiser is no stranger to the ADF and some of the modifications in Australian military versions include armour, ARB snorkels and exhaust modifications, military-specification tyres, auxiliary fuel tanks, water tanks, bumper winches and steel transport racks on the roof. **Toyota Tacomas** have been used by US Special Forces in Afghanistan, purchased from showrooms in the US and pressed into service with very little modification at all; however we suspect that the TAGs might be looking more to the type of blast- and bulletproof armoured rescue vehicles acquired by the Federal Government to help police deal with dangerous situations. But no doubt **BAE Systems Australia, Thales Australia** and others have their own design concepts for a SOV-Spt, preferably built in Australia.

Perhaps some of the 15 Chevrolet Suburban SUVs, up-armoured by US specialist **Scaletta Moloney**, and acquired by the ADF for SecDet duties in Afghanistan, may serve in the interim as a more discrete SOV-Spt vehicle for the TAGs until the heavy hitters arrive!



FOC for Vigilare

The Government has announced that the Vigilare Command and Control System has achieved Final Operational Capability (FOC).

Vigilare is an air defence command and control system giving the Defence Force improved surveillance and communications capabilities.

The system receives surveillance data from many different sources, including the over-the-horizon

radar system, civil and military air traffic agencies, and military surveillance radars.

Vigilare correlates this information to produce a comprehensive picture of air activity over Australia and throughout our near region. It then enables its operators to pass surveillance information and instructions to aircraft operating throughout Australia.

The Vigilare Command and Control System will significantly enhance the effectiveness of Australia's existing air surveillance and battle management capabilities, and help Australia maintain an advanced technical capability.

The system is installed at RAAF Base Williamtown and at RAAF Base Tindal.

The prime contractor for Vigilare is **Boeing Defence Australia**.

Vigilare was added to the Project of Concern list in 2008 due to schedule delays. Boeing and Defence worked closely together to address the issues and get the project back on track. In June 2011 the Government announced that Vigilare had been taken off the list.





ABDIU's innovation challenge

Tom Muir

Late last year the Australian Business Defence Industry Unit wrote to VADM Peter Jones, Chief, Capability Development Group, with a proposal to encourage and promote innovation from defence industry, as a complementary initiative to the Capability Technology Demonstrator (CTD) program. ABDIU's Graeme Dunk called it the Defence Industry Challenge.

As currently structured the CTD program takes proposals from Technical Readiness Level (TRL) 2 through to TRL 4 or 5. The **Rapid Prototyping, Development and**

Evaluation (RPDE) program can advance technologies through to TRL 7. The lack of ongoing development funding under existing programs means there is a high risk that technologies of interest to Defence will not achieve qualification through test and demonstration to qualify them at TRL 8, the level at which they are ready for introduction into service.

This new initiative would provide a mechanism to consider proposals at a minimum of TRL 5/6 and advance them to TRL 8. In this way the proposal fills an existing "development gap" while maintaining consistency with current Defence initiatives.

The proposal is based upon the US Foreign Comparative Testing System, which has resulted in 105 programs being deployed on operations in the last 10 years. In essence the proposal will assess, procure and field lifesaving or game-changing capability. The value of this initiative is that it provides an opportunity for cost effective analysis of ideas that have potential to make a real difference instead of rejecting ideas as a result of "qualified hunches" from individual staff officers.

The requirement for proposals to be at TRL 5/6 will ensure that industry has sufficient faith in their proposal to have invested in development of a representative model or prototype system that has been tested in a relevant environment. Similarly, developments funded under the CTD program will be around this technical readiness level on successful completion. Proposals would be supported through "dollar for dollar" funding from industry selected. Funding would be focused on developing proposals with user input to allow the system in its final form to be proven to work under expected operational conditions through a field trial (TRL 8).

The ABDIU points out that the proposal would not impact on the selection or management of CTD projects as these developments commence from a much lower TRL level. The continuation of the CTD program, or some similar scheme, would continue to be required in order to develop capability concepts of interest.

Successful completion of a field trial will mark the Challenge milestone at which a decision could be made by Defence for implementation.

Options would include: staffing it as an Urgent Operational Requirement, including it in a current program through contract change proposal, drafting a new requirement for inclusion in the DCP, progression as a Minor Project, or no further development.





US F-16s replicating threats in the land down under

Julian Kerr | Sydney

US Air Force F-16s sporting arctic camouflage are spending three weeks at RAAF Williamtown replicating threats posed by opposing forces for Hornet and Super Hornet pilots participating in the RAAF's 32nd Fighter Combat Instructor (FCI) course.

The 10 F-16s of the USAF's 18th Aggressor Squadron are normally based at Eielson Air Force base in Alaska; hence the striking black, grey and white tiger stripe camouflage.

Their presence adds an edge to the early phases of the 20-week long FCI, which develops the skills in air combat tactics of the RAAF's best fast jet pilots, air combat officers and weapons systems officers.

"To be a Fighter Combat Instructor, you need to have attained the highest level of leadership as a fighter pilot to even qualify for this course, so the training is very highly regarded," says Air Commodore **Tony Grady**, Commander Air Combat Group.

The USAF F-16s arrived at Williamtown on 17 February from Guam after taking part in Exercise Cope North 2013 alongside other USAF units, the Japan Air Self Defence Force and seven RAAF F/A-18As supported by an **E-7A Wedgetail**, **KC-30A multi-role tanker** and a **C-130J Hercules**.

At Williamtown, the F-16s are focusing on within visual range combat and manoeuvres, replicating the capabilities of various possible threat aircraft utilising Soviet-developed tactics.

"If the FCI director asks us to duplicate a certain threat it's up to us to replicate that to a T," says **Brigadier-General Mark Kelly**, commander of the Eielson-based 354th Fighter Wing (and a former exchange officer for more than two years with the RAAF at Williamtown's 2nd Operational Conversion Unit).

"We need to be where they ask us to be. At the right altitude, the right distance, the right parameters, at the right time, on the right frequency," he added.

"It's our job to provide exactly what they request until they get their training objectives met. If that happens, we lose, that's part of what we have to be ready to do."

Should RAAF participants fly outside visual range scenarios, they can call on Wedgetail assistance. The F-16s rely on USAF ground controllers who accompanied them from Guam to vector them to their targets.

ACMI (Air Combat Manoeuvring Instrumentation) provides a real-time flow of data from each aircraft.

"We know what shots are taken at what time, we know whether those shots are valid or not, and the FCI course staff will grade the student in terms of their overall assessment of the ride," says Squadron Leader **Steven Bradley**, the FCI course director.

The heavily-used Block 30 F-16s are among the oldest still flying with the USAF. Squadron Commander Lieutenant-Colonel **Phil Stodick** said an upgrade to the SCU-8 configuration was likely "in the next year or so".

It's understood this would allow the incorporation of a helmet-mounted cuing system and a new centre display unit which enable the aggressor pilots to more accurately assess their missile shots in the air.

Having been both a USAF Weapons School and FCI instructor, Brig Gen Kelly describes both courses as virtually identical.

"They produce a graduate-level aviator who has a PhD in flying his aircraft, who can compete with anyone around the world", he comments.





Lockheed Martin completes digital cockpit for installation on Australian Romeo

Lockheed Martin has completed the 400th Common Cockpit avionics suite for the US Navy's MH-60 Seahawk helicopter program.

The digital cockpit will be installed aboard the first of 24 MH-60R (Romeo) anti-submarine and anti-surface warfare helicopters to be acquired by the Royal Australian Navy via the US Government's Foreign Military Sales program.

"The Common Cockpit avionics suite has proved to be a highly effective flight and mission systems hub during more than 600,000 flight hours aboard the US Navy's fleet of 360 MH-60R and MH-60S helicopters built and delivered to date," Capt. **James Glass**, program manager for H-60 Multi-Mission Helicopters said.

"A digital, all glass cockpit that's common to both platforms and operationally proven will enable critical interoperability between MH-60 aircraft operated by both the Australian and US navies."

Australia is the first international customer to buy the US Navy's MH-60R multi-mission helicopter, which became operational in January 2006. The US Navy is expected to take delivery of the first mission-ready MH-60R helicopter in December 2013 for transfer to the Royal Australian Navy in early 2014.

All 24 Australian aircraft are to be delivered by mid-2016. "The MH-60R is a proven capability with the Common Cockpit at its core," Capt **Scott Lockey**, Project Director for the Australian MH-60R program said.

"The Australian acquisition of 24 multi-mission Romeo helicopters means that we will have the capacity to provide at least eight warships with a combat helicopter at the same time, and we can rely on the Common Cockpit to successfully network and communicate with our fleet."



HMAS Toowoomba undocks early

Working around the clock in the period leading up to Christmas, the Naval Ship Management (NSM) achieved three dockings of ANZAC Frigates in quick succession.

HMAS Perth's maintenance period included a planned docking on October 29, 2012 and she undocked



on time on December 10 having completed a wide range of activities. The floating dock had hardly dried out when, just two days later, *HMAS Stuart* was next on the blocks for her planned docking.

HMAS Toowoomba also conducted a docking in parallel with *HMAS Perth*. The ship configuration for this docking had not been undertaken before. Toowoomba required work on her external shaft line meaning that the ship had to be docked stern first to ensure the propellers were over the quayside. In addition, Toowoomba also had her helicopter still embarked providing further challenges for the docking team

At short notice, the NSM team swung into action to achieve the Defence Materiel Organisation's stringent approvals for this unusual docking configuration. This was all achieved to meet the ship's program and she was successfully docked on November 23, 2012. Work started on the shaft line and through NSM's management and the relationship with the supply chain the ship was able to undock three days early and resume her program without delay.

Rear Admiral **Bob Love**, CB, chairman of NSM commented "I've been involved in over 100 dockings of warships and this is the first time that I have seen one stern first with the added complication of the weight associated with an embarked helicopter. It is all credit to the ANZAC Systems Program Office and NSM who have worked tirelessly to make this happen and to get the ship back in the water three days earlier than planned to keep her operational program."

Not wanting to be outdone by all this activity occupying the NSM waterfront delivery team, NSM management personnel undertook audits by SAI Global and the DMO Maritime Systems Division's auditor, both passed; all whilst conducting the planning for the first ANZAC availability in early 2013.

DMO exercises option to extend supply terms of King Air 350 fleet



DMO Training Aircraft System Program Office (TASPO) recently took up the option to extend the term of supply of eight aircraft King Air 350 fleet at East Sale in Victoria.

The fleet primarily provides Air Force with its flight platform for the training of its Air Combat Officers.

The existing contract with **Hawker Pacific** provides for the turn-key supply and support of the aircraft under a performance based contract.

The extension sees the initial ten year supply term extended for a further five years.

TASPO and Hawker Pacific also provides a second fleet of eight King Air 350 light transport aircraft to support RAAF's air lift capability at 38 Squadron based in Townsville, North Queensland under similar commercial arrangements.





Hon Dr Mike Kelly AM, Minister for Defence Materiel with Pelican-Trimcast Business Development Manager, Matt Hill, and Technical Packaging Sales Manager, Justin Evans

Pelican-Trimcast awarded Trunk Locker contract

With first article approval finalised, Trimcast Products will start supplying the Trunk Lockers to the ADF under a new 3 year standing offer, continuing a 22 year supply story for one of Australia's long standing packaging solutions supplier.

All new ADF recruits are provided with trunk lockers. They are also required for moving equipment in and out of operational environments.

Depending on the ADF's requirements the value of the standing offer could be up to \$4.5 million.

"It's terrific to be able to announce this news here at the Avalon Airshow. This is a great milestone to achieve and a testament to the hard work and commitment by all of our staff at our Victorian Knoxfield facility," said Christian Nyman, Managing Director of Pelican Products Australia.

"All 70 staff in our team should be proud of what they have helped to achieve. Whether it is manufacturing the trunk locker or designing mission critical packaging solutions for Land, Sea or Air systems, weapons or sensitive electronics, we take great pride in knowing we are assisting in helping to ultimately support the warfighter and our protectors."

Trimcast Products began operating in 1979, and started supplying their first trunk locker to the ADF in 1991. In the past 34 years they have created over 1,200 NSN-coded packaging solutions for all manner of ADF platforms and capabilities, many of which are now exported to foreign militaries.

In 2011 the company was acquired by Pelican Products Australia, a designer and manufacturer of both high-performance protective case solutions and advanced portable lighting systems.



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, Prime Minister Julia Gillard confirmed that Australia will go ahead with purchasing the **F-35 Joint Strike Fighter** from the US, despite the jets being grounded by the Pentagon due to a cracked engine blade.

CAE Australia completed a comprehensive visual system upgrade for the RAAF's C-130J full-flight and mission simulator.

A new **smart phone application** helping current and former serving



members of the ADF to identify and manage mental health symptoms was launched. **RMIT University** is joining forces with the Defence Department and the University of Melbourne to collaborate on projects aimed at strengthening Australia's capabilities in defence science.

Also, Rolls-Royce delivered the new and advanced **Axial Mk1 waterjet** for the latest Freedom-variant of the LCS class.

International



JSF variant concern - Now he tells us!

The Defense Department should not have decided to develop three distinct variants of the F-35 Joint Strike Fighter, former Chief of Naval Operations retired Admiral Gary Roughead said.

Roughead went on to say that because the Navy version could have been adapted to handle the Air Force mission. But with development efforts now well under way, however, there could be no turning back.

The Marine Corps needs the F-35B short-takeoff-and-vertical-landing (STOVL) version of the fighter jet, but distinct Navy and Air Force variants are unnecessary because the F-35C version - designed to fly from aircraft carriers - has the potential to operate from conventional, land-based runways, Roughead told *InsideDefense.com* in a brief February 22 interview.

Stay tuned for next week when *ADM* reveals what Avalon had to say about the JSF from US JPO, **Lockheed Martin** and SME perspective.



Thales completes acquisition of Visionix

Thales has completed the acquisition of the Visionix Helmet Mounted Display (HMD) and InterSense motion tracking businesses formerly owned by Gentex Corporation.

Effective December 28, 2012, the new company, Thales Visionix, Inc., is operating as a wholly-owned subsidiary of Thales.

This acquisition is a strategic fit that complements Thales' global portfolio of **Helmet**



Mounted Sight and Display systems for rotary and fixed wing platforms. It gives Thales the ability to offer highly capable HMD technology amidst rigorous budget constraints within the market.

Within Thales Visionix Inc., Thales will also continue to develop the business of motion tracking systems, which are marketed under the brand name InterSense, and are used in HMD products.

Thales Visionix Inc. operates under a proxy agreement with the US Department of Defence. The company is maintaining both of its existing locations - Aurora, Illinois, and Billerica, Massachusetts - and the current management team remains in place.



L-3 WESCAM MX-25 demo a success!

L-3 WESCAM has successfully delivered its first in-flight demonstrations of its MX-25 electro-optical/infrared (EO/IR) imaging system.

The MX-25 was delivered to the US Army's Yuma Proving Ground in Arizona, where it was evaluated by the Persistent Threat and Detection System (PTDS) Communications-Electronics Command (CECOM) team as a plug-and-play upgrade path for the MX-20 systems currently deployed on PTDS aerostats.

Upon delivery and after only two hours of installation, the MX-25 was operational and evaluated over a course of nine consecutive days. During this time, a side-by-side resolution test was conducted between the MX-20 and MX-25, whereby the MX-25 provided similarly detailed thermal imagery at fifty per cent greater standoff distances.



UK's Cyber doubts

The UK Defence Committee has cast doubt on the MoD's ability to deal with the consequences of a sustained cyber-attack. One of the main conclusions of the Committee's report on Defence and Cyber-Security, published in January, is that the British Armed Forces are now so dependent on information and

communications technology that their ability "to operate effectively could be fatally compromised" should such an attack happen.

"We have asked the Government to set out details of the contingency plans it has in place should such an attack occur." said the Rt Hon **James Arbuthnot**, chair of the committee. "If it has none, it should say so – and urgently create some."





Elbit delivers Hermes 900 to a customer in the Americas

Elbit Systems has delivered a Hermes 900 unmanned aircraft system (UAS) to a customer in the Americas.

The program includes delivery of ESL's Hermes 900 unmanned air vehicles, Universal Ground Control Stations (UGCS) including installation in a mission control centre, advanced electro-optic systems and additional unique systems.

Due to high demand, ESL has increased its UAS production activities and will soon be delivering additional Hermes 900 systems to other international customers,

ESL announced on December 31, 2012 that it was awarded a second contract to supply a wide range of Hermes 900 UAS to the Israel Defence Forces (IDF). The contract, a follow-on to the initial IDF order for Hermes 900 in 2010, calls for development of additional advanced UAS capabilities as well as UAS maintenance services. On January 27, 2013, ESL announced that it received an approximately \$35 million contract from the Israel Ministry of Defence (IMOD) for the development of advanced features for Unmanned Aircraft Systems (UAS). One of the mission requirements is the quick re-configuration of the UAS' payloads.

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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

International Maritime Security Conference

DATE: 14-16 May 2013, Changi, Signapore

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.

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.