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Fourth warship vital - what about more?

Tom Muir

It is reported that Kokoda Foundation's Ross Babbage has urged the Defence Minister Stephen Smith to commit up to \$1.8 billion to build a fourth Hobart class Air Warfare Destroyer to bolster this country's defences against 'the growing threat of a North Korean ICBM attack against this country'.

Babbage told the *FinReview's* **John Kerin** that the Royal Australian Navy (RAN) would be able to mount a far more effective missile shield with four warships rather than three, and said plans to build an extra ship would be included in the upcoming Defence White Paper 2013.

"If you have four air warfare destroyers it greatly increases the area of coverage and you have far greater chance of destroying an incoming ballistic missile," Professor Babbage said.

Babbage said the warships would also have to be armed with upgraded missiles but this was not a difficult challenge given the US had deployed advanced missiles on its destroyers.

While *ADM* have no argument with Professor Babbage over the introduction into RAN service of a fourth Hobart class AWD, if not his justification, we believe there may be good grounds for the sequential local build of another eight Spanish F100s, but this time not in the guise of a full blown Aegis AAW destroyer but in the more discrete form of an ASW Future Frigate, to eventually replace the ANZAC Class FFHs.

The 2009 White Paper stated that the Government would acquire a fleet of eight new Future Frigates, which will be larger than the



Anzac class vessels. This new project **SEA 5000** will introduce into service the next generation of naval surface combatants that will have a strong emphasis on anti-submarine warfare and be capable of independent and task group operations.

The Future Frigate will be designed and equipped with a strong emphasis on submarine detection and response operations. They will be equipped with an integrated sonar suite that includes a long-range active towed-array sonar, and be able to embark a combination of naval combat helicopters and maritime Unmanned Aerial Vehicles (UAV) although there will inevitably be questions about the extent of afloat support that each ship can provide for these aviation assets over an extended period.

Equipped with the more powerful **CEA Technologies'** CEA-FAR radar that are being developed under SEA 5000 Phase 1A, and **Saab Systems** fourth generation 9LV combat management system, bringing the ship sensors, weapons and communications into a single, highly-integrated entity. Also included would be an Infrared Search and Track capability to improve detection of low-level anti-ship missiles in the littoral environment and a Link-16 tactical data link.

The F100 Future Frigate would need to incorporate low frequency active and passive sonars in addition to the standard hull mounted sonar to protect a maritime force against submarine threats. No doubt these and other sensors would be provided by modern derivatives of the **Thomson Spherion** hull-mounted sonar, the Petrel mine and obstacle avoidance sonar system, the **Ultra Electronics** multistatic variable depth sonar system, the Ultra 2500 electro-optical director, and the **Sagem** VAMPIR IR search and track system.

Weapons would likely include a multi-cell Mark 41 Vertical Launch System with RIM-66 Standard 2 missile and RIM-162 ESSM. At least two 4-canister AGM-84 Harpoon/SLAM land attack missile launchers, together with one Mk 45 5in gun to assist in land attack operations, would be needed. For self-protection the vessel would need **Nulka** decoy launchers, or their modern equivalent, as well as multipurpose decoy launchers.

A major ASW asset would be the flight deck and systems support for an MH-60R Seahawk helicopter equipped with dipping sonar linked to the ships' combat system. Propulsion would be based on **GE's** LM2500+G4 aeroderivative gas turbine is the 4th generation of the industry standard-setting LM2500 marine gas turbine. With eight F100 Future Frigates, two LSDs and possibly four AWDs all of Spanish design, this country might then be able to boast an Armada to rival that of the Spanish Navy.



More AIC plans released

Australian industry has more insight into expected opportunities within major Defence capability contracts, following the release of the first Australian Industry Capability (AIC) Plans.

In late February a further three AIC plans were released publicly. Public AIC Plans are released by contracted Defence suppliers and more plans will be progressively released for all eligible procurements.

The Minister for Defence Materiel, **Dr Mike Kelly**, announced the public release of the plans at the 2013 *Australian Defence Magazine* Congress and said they would be very helpful.



"These plans will prove to be an important source of information for Australian industry, particularly small to medium enterprises," he said.

"I acknowledge **BAE Systems Australia, CSC Australia** and **Ultra Electronics Avalon Systems** for providing the first Public AIC Plans detailing opportunities for Australian industry to compete for work."

Dr Kelly encouraged industry to monitor the DMO's industry resources webpage to keep abreast of the latest information. "I encourage all Australian industry companies with an interest in contributing to Defence, to regularly visit the [website](#) and examine the Public AIC plans for business opportunities



MIL-S- 901D Shock Test System available again

Vipac Engineers and Scientists has announced the MIL-S-901D medium weight test capability acquired as part of the former ADI test Laboratories is available again to the defence industry.

The facility, which offers a real world simulation of nearby explosions to maritime vessels, provides the only commercially available capability of its type in the southern hemisphere to test to the industry standard of assurance for shipboard equipment.

The medium weight test system complements the existing MIL-S-901D light-weight facility, shock and vibration capabilities that comprise Vipac's extensive maritime equipment qualification capabilities.

Vipac has received its first order for testing using the facility from the Department of Defence to test the survivability of complex naval platform systems within a framework of total ship survivability.

ABDIU's abridged report on DMO contract trends

In late 2012 the Australian Business Defence Industry Unit (ABDIU) sourced data on contracts placed by the DMO from the Austender website with the intention of analysing the data to discern any apparent trends. The impetus for this work has been anecdotal information provided to the ABDIU by some members regarding perceived DMO contracting activities and behaviour.

The complete report on DMO contract trends has been distributed to ABDIU members, now a shortened version has been produced for wider distribution and is available from the DIU's [Graeme Dunk](#). This shortened report is for wider distribution. Of the many analyses in the abridged version, that on contract ownership caught our eye.

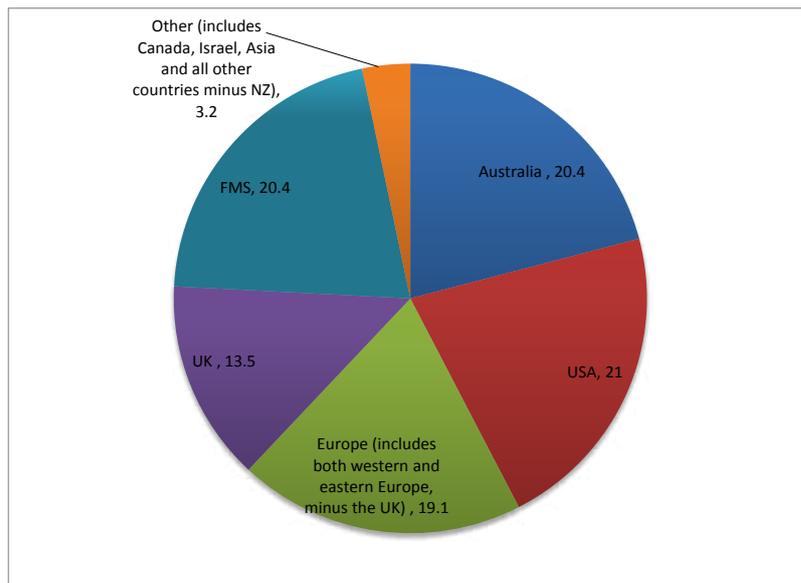
Analysis of Contract Ownership

The original aim of this analysis was to investigate the proportion of DMO contracts



that have been placed directly with Australian-owned companies as anecdotal information tended to indicate that this was low and reducing. Moreover, anecdotal information also tended to indicate that the size of these contracts was lower than companies with overseas parents. The investigation of contract activity as a function of location of parentage developed as a by-product of this initial aim.

Contracts under this analysis have been assigned according to company ownership at the highest identifiable level. In some cases this means that the contract passes through a number of companies (and countries) before being assigned under this analysis.



A number of companies changed ownership during the period covered by the analysis that resulted in a change of regional ownership as described under this model. This has been taken into account in the way that contracts have been categorised.

The distribution of DMO contracts over the period under analysis has been as pictured.



Aviation Australia and Hawker Pacific formalise training partnership

Aviation Australia and Hawker Pacific have signed an agreement to formalise their previous Memorandum of Understanding (MoU) for a specialised training program in Cairns.

The program is intended to provide advanced practical expertise to **Aviation Maintenance Engineering (AME)** students graduating from the Aviation Australia's International Training Diploma program.

"The MoU was agreed to in June 2012 and has been working well for both parties so we think this is a great time to formalise the processes we have put into place," Hawker Pacific's chief operating officer, **Doug Park** said.

The agreement allows students who have been undertaking an International Diploma at the Aviation Australia campus in Brisbane to relocate to Cairns following two years of theoretical instruction, to complete an intensive 10 week program of practical experience with Hawker Pacific. The program offers these students



an opportunity to apply their newly acquired skills and knowledge to gain valuable real-world experience in a specialist aircraft maintenance facility.

Aviation Australia, as the training provider of the Cairns Aviation Skills Centre, has agreed to manage up to 20 AME trainees at a time and facilitate their placement with Hawker Pacific.

Under the MoU, a number of students have participated in trial programs. The initial group through the program comprised 10 engineers from the **Royal Oman Police (ROP)** who arrived in Cairns in early August 2012.

“These AME trainees have been working for the ROP for some time and have come to Aviation Australia to gain internationally recognised qualifications,” Bill Horrocks, CEO of Aviation Australia said. “Whilst in this program they are supervised and mentored by some of Australia’s most highly qualified and experienced licenced aircraft maintenance engineers (LAME’s).”

The Cairns Aviation Skills Centre located adjacent to the Hawker Pacific Facility is a local industry owned facility that provides all aspects of aviation training to North Queensland, Northern Territory and PNG based aviation communities.

Hawker Pacific has worked closely with Aviation Australia a key training provider of avionics and mechanical technicians, which has provided over 50 apprentices to the Cairns facility over the past eight years.

This training program between Aviation Australia and Hawker Pacific will produce students to the internationally recognised European Aviation Safety Agency (EASA) standards, an accreditation the Hawker Pacific Cairns facility has held for many years.

Australian innovators recognised at Avalon2013

Five Australian innovators have been presented with the inaugural Aerospace Australia Industry Innovation Awards at Avalon2013.

The winners include a firm in Sydney whose quick-release harness is designed to prevent crew and passengers being trapped in a ditched helicopter; a Brisbane company that has created an entirely new high-technology manufacturing capability never seen before in Australia; and a Melbourne researcher who is using vibrations in the airframe of an aircraft to generate electricity.

The Innovation Awards, including SME Innovation Grants and individual Innovation Scholarships worth \$10,000, were established last year by **Aerospace Australia Limited**, organiser of the trade show at Avalon2013.

The Chairman of Aerospace Australia Limited, Air Marshal (retired) Les Fisher, AO, presented the inaugural awards February 27 in a ceremony at Avalon2013.

The winners are:

- National Defence Innovation Award – **BAE Systems Australia**
- National Defence Innovation Awards (Highly Commended) – **General Dynamics Mediaware**
- Defence Industry SME Innovation Grant – **Tricon Defence Pty Limited**
- Defence Industry Innovation Scholarship – **Luke Vandewater, DSTO**
- National Civil Industry Innovation Award – **TAE Gas Turbines Pty Limited**
- Civil Industry Innovation Scholarship – Ray Vidler, **TAE Gas Turbines Pty Limited**

“Although highly prestigious awards for excellence in engineering, industrial design and business already exist, ours are the first national awards to recognise and reward



the efforts and achievements of innovative Australian companies and individuals in the aerospace industry," Avalon2013 chief executive officer Ian Honnery said.

The winners of the SME Grant and the two Innovation Scholarships were presented with cheques for \$10,000 each as rewards for their efforts and a small financial contribution to further innovation and the development of professional skills.

"Our purpose as a foundation is to promote the development of Australia's industry capacity in the fields of aerospace, defence, maritime and IT so we're putting our money – literally - where our mouth is," Honnery said.

"The Awards attracted a field of high-quality candidates, and this speaks for the quality of the individuals, companies and organisations making up Australia's civil and military aerospace industry," he added.



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.

Making headlines this week, Minister for Defence Materiel Dr Mike Kelly welcomed the Boeing Company's selection of Australian supplier Ferra Engineering Pty Ltd to manufacture a new extended range wing kit that will enhance the performance of the Royal Australian Air Force's **Joint Direct Attack Munition (JDAM)**.

Also, Julian Kerr talked with Defence Teaming Centre chief executive Chris Burns about the senior level access gained by a South Australian defence sector group during a recent **10-day visit to the US**.

Austal USA's order backlog grew by approximately US\$681.7 million as a result of two additional **Littoral Combat Ship (LCS)** contract options being exercised by the US Navy.

International



James Fisher and Sons acquires Divex

James Fisher and Sons plc has purchased Divex Limited (Divex) for an initial consideration of £20 million in cash plus a further maximum additional consideration of £13 million linked to future profitability targets.

Divex is a leading supplier of diving equipment to the offshore oil industry and other sectors. It designs, assembles and distributes a broad range of diving products



for commercial and military customers.

Derek Clarke and **Doug Godsman** the current joint managing directors will continue with the business as will **Doug Austin** managing director Asia Pacific and group business development manager.



Rheinmetall wins in Europe

Rheinmetall has formally transferred its new IdZ-ES future soldier system to the German Bundeswehr.

The Düsseldorf, Germany-based Rheinmetall Group was awarded the contract to develop the IdZ-ES expanded system in 2006. The German government ordered a first lot of thirty systems in 2012, which Rheinmetall is currently delivering according to plan. (Each system is designed to equip a 10-man section.) The troops now have until June 2013 to practise using the new systems before deploying to Afghanistan.

Rheinmetall received a follow-up order in January 2013 to supply a further 60 systems. This order is worth €84 million and encompasses

equipment for 60 infantry sections, i.e. 600 soldiers. Delivery will take place in two lots of thirty systems each, the first in mid-2013, the second at the end of the year. This ensures that the next two Bundeswehr contingents to deploy to Afghanistan will receive the new equipment in time to familiarise themselves with it.

In other news, the Italian armed forces have awarded Rheinmetall a contract for more than 50,000 rounds of enhanced-performance 40mm x 53 war shot ammunition.

Following Canada and Denmark, Italy is now the third NATO nation to equip its armed forces with this advanced Rheinmetall product. The order is worth €8.7 million.

Designed for the use in automatic grenade launchers like MK19, MK47 and Heckler & Koch GMG, the highly accurate enhanced performance 40mm x 53 High Velocity High Explosive Dual Purpose Insensitive Munition with Electronic Self Destruct (HV HEDP IM ESD) is extremely effective against semi-hard targets and lightly armoured vehicles at ranges of up to 2,200 metres. Thanks to its newly developed shaped charge warhead, it is the only 40mm cartridge on the market today that can penetrate 80 mm of RHA steel. Another exclusive performance feature is the round's insensitive propulsion system. Together with its explosive the round conforms to the insensitive ammunition criteria contained in STANAG 4439 Level/Reaction Type V. A highly reliable electronic self-destruct mechanism is another important safety feature, minimizing the risk of unexploded duds.



MDA may work with US Navy on Railgun project

The Missile Defense Agency (MDA) is involved with US Navy development of high-powered lasers and may become more involved in the electromagnetic railgun project as it tries to add more sophisticated ballistic missile defence capabilities to ships with a finite amount of space on board, the agency's new director said at a recent conference.

Vice Admiral **James Syring**, who took command of MDA in November after leading the Navy's program executive office for integrated warfare systems noted in his speech that "we're starting to understand and analyse the railgun in terms of what that could mean for a terminal defence capability. We're in discussions right now with the Navy on some of the initial reports and briefings that have gone on - we're at the table in those discussions."

VADM Syring said that while MDA is currently on the "periphery" of the railgun effort, he expects a closer partnership going forward, in part due to the good relationship he personally has with PEO IWS, Naval Sea Systems Command's engineering directorate, and other relevant offices from his prior assignments.

MDA declined to provide more specifics on the talks with the Navy on the railgun and laser weapons projects. MDA spokesman **Richard Lehner** said that those systems "are very early basic research projects with no timetable for future development. MDA works closely with the Navy, as well as with all the military services, in the development, testing, acquisition and fielding of ballistic missile defence technologies."

Syring also addressed other future capabilities during his speech, saying that more discriminating sensors and better discrimination algorithms would be a priority for the agency to help better "see the scene as it develops with complex separating threats."

"It's not just about the missile and how fast it can fly, it's about what it sees when it gets into space and the ability to discriminate the [re-entry vehicle] from all the other junk that's around it," he explained. "You can't understate the importance of that sort of capability - the ability to discriminate in a real-time fashion, feed that information back to a ground station and back to the missile, more importantly, is an area that we continue to improve upon." - *Megan Eckstein/Inside Defense*



A huge shipbuilding deal could get bigger

The US Navy's plan to issue its largest-ever shipbuilding contract, a US\$27 billion, five-year deal to buy nine Virginia-class submarines, now has a viable way forward via legislation the House adopted this week approving a new multiyear deal - and a down payment on a 10th boat.

The fiscal year 2013 defence appropriations bill passed by the House this week would add US\$778 million in advanced procurement funding for a second attack submarine in FY-14 and grant the Navy permission to sign a multiyear procurement contract for a fourth Virginia-class block buy. The Senate could take up the bill as soon as this week. ▶▶▶

The Virginia-class submarine program is a 30-boat acquisition effort projected to cost US\$93 billion, making it the Pentagon's second-largest procurement project. The Navy in FY-13 is buying the last two submarines of a third Virginia-class block buy - a total of eight boats - that began in FY-09. During that block buy, the Navy and its suppliers realised sufficient cost-reduction measures to accomplish a long-sought goal: procuring two attack submarines per year-*Inside Defense*

Army official predicts more 'trades' in GCV



The US Army predicts that the automatic cuts imposed by sequestration and the possibility of a yearlong continuing resolution will ultimately delay its Ground Combat Vehicle (GCV) development time line, but remains confident it can deliver an affordable GCV because it can still trade away existing requirements, according to the service's top military acquisition official.

At present, the Army has pegged the unit cost of a GCV between \$9 million and \$10.5 million, though the Pentagon's cost assessors place it between \$16 million to \$17 million and both parties have yet to agree. Regardless, Lt. Gen. **William Phillips**, the military deputy to the Army acquisition executive, said last week that the service would hold the line on unit affordability despite developmental delays posed by sequestration, which would cut the program's budget by 10 per cent.

"The CR and sequestration would impact the development program as we know it today in that it would move the milestone C to the right to some extent," he told *Inside the Army* on March 6.

Securing nuclear weapons against cyber attacks

Defence leaders should assign US Strategic Command the vital task of ensuring nuclear weapons are ready for use in the face of cyber-attacks, which continue to outpace the Defense Department's countermeasures, according to a new Defense Science Board report.

The recommendation comes with the finding that "most of the systems" making up the nuclear deterrent were never assessed in their totality against a highly sophisticated



cyber-attack, states the report.

The science board task force that compiled the report classifies cyber-attacks into three categories: Tier I and II attacks comprise exploits of existing, known vulnerabilities; tiers III and IV assume attackers capable of discovering unknown vulnerabilities; and attacks in tiers V and VI would come from an adversary capable of creating new vulnerabilities thanks to deep pockets, sufficient time and the use of conventional capabilities.

"Identification of operationally introduced vulnerabilities into complex systems is extremely difficult technically, and as a result, cost-prohibitive," the report concludes. Currently, "the functioning of DOD's systems is not assured in the presence of even a modestly aggressive cyber-attack," the document states.



DCNS exhibits at Colombiamar

DCNS has recently established a partnership with Colombia, the Group contributed to carry out the refit of the four Almirante Padilla frigates for the Colombian Navy.

DCNS delivers innovative solutions from integrated warships to strategic systems, equipment, services and new energy solutions. DCNS will participate to Colombiamar exhibitions in Cartagena de Indias from March 13-15, 2013.



Change of leadership at EADS

The EADS Board of Directors has accepted the resignation of Lutz Bertling as Chief Executive Officer of Eurocopter and Member of the EADS Group Executive Committee, effective April 30, 2013.

Bertling, 50, has been at the helm of the Group's helicopter Division since November 2006 and had recently expressed his desire to depart the Group in pursuit of another professional opportunity in Germany.

The EADS Board of Directors has appointed **Guillaume Faury**, 45, to succeed Lutz Bertling. Effective May 1 2013, Faury joins Eurocopter from Peugeot S.A., where he has served as Executive Vice President for Research & Development since 2010 and as Member of the Managing Board since 2009.

Correction: Please note that applications to participate in the Defence Engineering Internship Program will open **April 8 - May 3 2013**. We apologise for any inconvenience that may have resulted from our error in the last edition of Defence Week Premium.

FORTHCOMING EVENTS.....page 11



FORTHCOMING EVENTS

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

SEWG

DATE: 17 April 2013, Russell Offices, Canberra

ENQUIRIES: Lori Catelli, Ph: 02 6265 7108; Email: lori.catelli@defence.gov.au

The sixth meeting of the SEWG will take place from 10.00am to 1.00pm. Respond by email by Thursday 28 March with the names and email addresses of those attending the SEWG meeting.

International Maritime Security Conference

DATE: 14-16 May 2013, Changi, Singapore

ENQUIRIES: More details to be released closer to the date.

IMDEX Asia Web: <http://www.imdexasia.com/index.aspx>

IMSC 2013 will bring together Navy Chiefs, Coast Guard Directors-General and academia around the world to discuss threats to maritime security and safety, as well as develop frameworks and solutions to deal with the security challenges that threaten and disrupt sea lines of communication.

ADM Cyber Security Conference

DATE: 12-13 June, 2013, Hotel Realm, Canberra

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

Email: Jamie.burrage@informa.com.au **Web:** www.admevents.com.au

ADM's 3rd Cyber Security Summit will see stakeholders from Australia's Defence and National Security agencies address the current and emerging cyber threats to Australia's security. More details to be released closer to the date.

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.