ADM AUSTRALIAN DEFENCE MAGAZINE

DEFENCE WEEK

PREMIUM EDITION NEWS | INTELLIGENCE | BUSINESS OPPORTUNITIES | EVENTS

IN THIS ISSUE

NATIONAL NEWS

INTERNATIONAL NEWS

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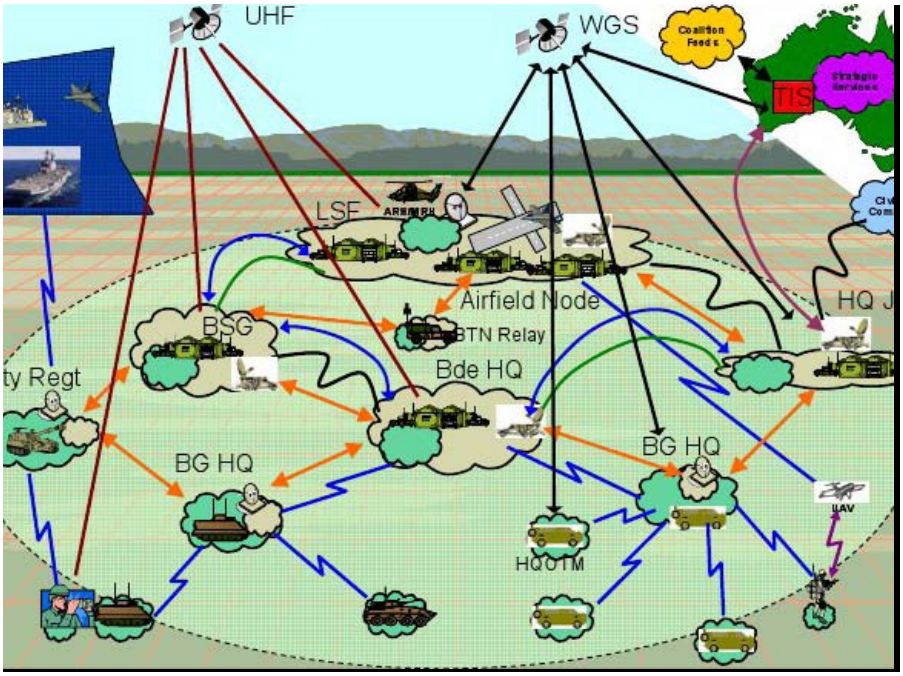

JP2072 delayed again

Katherine Ziesing

The four contenders vying for the next phase of JP2072 no doubt attended the Land Warfare Conference last week with a sense of anticipation, hoping that all their tender work that they slaved over last Christmas would pay off. Thales, Boeing, Lockheed Martin and Raytheon and their respective teaming partners got a shock when the program office announced that the digital backbone of Army would be delayed by another year, descoped (thanks to less money available) and would require yet another tender-like response over Christmas.

The thought of spending yet more millions on their responses has less than impressed the industry players involved. *ADM* understands that the four primes had very similar offerings in terms of cost and capability and are at a loss to explain why the program office cannot make a decision based on the information already provided.

Talk at LWC that the four companies may write a letter to this effect, asking the Commonwealth to down select to two contenders and put two out of their misery was rife. But what this may mean for probity remains to be seen. Regardless of what the players do, the delay is less than ideal for everyone, particularly the end user.

As background, under **Phase 2B of JP 2072**, Defence is embarking on one of its most significant communications acquisition programs which will see replacement of the existing Parakeet trunk communications system by a new **Battlefield Telecommunications Network** (BTN)

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with new terrestrial and space bearers, and a Local Area System including telephony and video teleconference capabilities. High bandwidth capacity systems will provide IP connectivity from HQ to lower echelon units. The majority of this equipment will be in-service MOTS/COTS capabilities.

Given the program has seen numerous *Days of Our Lives*-style delays (General Dynamics packed up and went home a few years ago when the DMO became the prime systems integrator) and considering the prominence that Army has placed on getting their comms right, even the most optimistic of Defence watchers are scratching their collective heads at this decision.

Finmeccanica joins Aussie supply chain program

Tom Muir

Finmeccanica of Italy has been added to the Australian Global Supply Chain program aimed at spurring international contracts for local industry. Minister for Defense Materiel Jason Claire signed a Global Supply Chain Deed with the Italian company at the Land Warfare Conference last week.

"Finmeccanica is a big addition to our Global Supply Chain program and I'm pleased to welcome them on board," Clare said.

"Australian small and medium businesses have a range of quality products and services. This Deed will help them get access to more work across Finmeccanica's global supply chain."

Finmeccanica is a high-technology manufacturing and services company in the areas of cybersecurity, electronic systems, torpedoes, helicopters, aircraft and fighter trainers. It has 70,000 employees and reported revenue of $24 billion.

Australia has invested more than $20 million over the past five years in the Global Supply Chain program. Among defence sector, multinational companies that have signed onto the program are **Boeing**, **Raytheon**, **Thales**, **Lockheed Martin**, **BAE Systems** and **Northrop Grumman**.

"When the program was established everyone agreed that if it could provide a 10-fold return on the government's investment it would be a roaring success," Clare said.

"To date it has delivered an excellent return on investment with more than $463 million in contracts awarded to Australian industry."

Rheinmetall aquires Sydac

Rheinmetall Simulation Australia has acquired the defence operations of Sydac Pty Ltd, the company announced at the Land Warfare Conference last week.

South Australian Treasurer and Minister for Defence Industries **Jack Snelling** welcomed the announcement of the acquisition.

"This announcement strengthens Rheinmetall's presence in South Australia and signifies there is a long-term future for them in our state," Snelling said. "Having met with Rheinmetall in Germany in September and seen first-hand their advanced simulation-based training products as well as other aspects of their business I am confident there are opportunities for them to continue to expand their simulation and training business in Australia's Defence State."

Adrian Smith, managing director of Rheinmetall Simulation Australia, commented that "Sydac has been a leader in the Australian defence simulation industry, servicing the ADF since the late 1980s and building up a great capability as well as a valuable team. We look forward to continuing and expanding their relationship with the Australian defence community as we add the products and expertise of Rheinmetall Defence's Simulation and Training business to their already impressive capabilities".

Rheinmetall Simulation Australia is a wholly owned subsidiary of German defence and automotive company **Rheinmetall AG**, which has an annual turnover of approximately €4 billion (AUD$ 5 billion). Rheinmetall Defence's Simulation and Training business unit is Europe's second-largest simulation and training company and the largest source of defence simulation equipment for land warfare operations.

Rheinmetall Simulation Australia will provide advanced simulation-based training products and services for maritime, air and land applications, and plans to grow the company into a major supplier of these products.

Sydac has been providing simulation-based products and services in Australia since 1989. Today, its defence business encompasses some twenty employees and has anticipated sales for 2012 of around AUD$ 6 million. Sydac develops simulation-based systems for the Australian Defence Force as well as providing maintenance and support services for deployed training capabilities.

SPY radar for first Destroyer arrives from US

The Air Warfare Destroyer (AWD) Alliance has taken delivery of all SPY radar array faces that will be installed

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on the first destroyer, *Hobart*.

AWD Alliance chief executive officer **Rod Equid** said the first two **AN/SPY-1D(V) radar array faces** arrived in June and now the final two faces for the first ship have arrived in Adelaide from the US. The radar is the main sensor of the Aegis Weapon System and will provide the Hobart Class destroyers with comprehensive surveillance around the ship.

Equid said the multi-function SPY radar is capable of search, automatic detection, tracking of air and surface targets and support to missile engagement.

"The SPY radar is readily recognisable by the four octagonal-shaped array faces that are located on the mast of the ship," Equid said. "The four array faces send out beams of electromagnetic energy in all directions, providing a continuous search and tracking capability for hundreds of targets."

"The SPY radar, combined with the AN/SPQ-9B horizon search radar, will ensure each of the destroyers go into service with state-of-the-art radar packages."

All three ships will be armed with a 48 **cell Vertical Launch System**, an **Mk 45 5" gun**, **phalanx close-in weapon system**, **torpedoes**, **anti-ship harpoon missiles**, **Nulka missile decoy system** and **hull mounted sonar**, as well as variable **depth sonar** for detection of enemy submarines and torpedoes.

For more on the progress of the sonar suite, grab a copy of the November edition of *ADM* where **Ultra Electronics** managing director **Doug Burd** speaks in *From the Source*.

High interest in JSF sustainment opportunities

More than 160 companies, including Australian firms, have registered interest in the Joint Strike Fighter program's life-cycle sustainment opportunities, in response to the US Government's plans to compete this work. The Industry Day has been scheduled for November 14-15 in the Washington DC metro area with the exact time and location to be provided as an amendment to the Federal Business Opportunities (FBO) website.

The results of this Industry Day will be used to assess tradeoffs and alternatives available for determining how to proceed in the acquisition process.

Although *ADM* has reported on the program in a recent edition of *Defence Week Premium*, we now have updated information including that of Australian industry interest. As one means of reining in the F-35's estimated $1.1 trillion life-cycle sustainment and operations costs, the F-35 Joint Program Office (JPO) is looking for support in the following sustainment functional areas: Supply Chain Management (SCM); Autonomic Logistics Information System (ALIS); Training Systems; and Support Equipment.

Supply Chain Management: The F-35 JPO plans to use Performance Based Logistics (PBL) to allow the US Government's customers, (which we assume means those foreign governments acquiring F-35 aircraft,) to purchase, via the JPO, a package of support structured to meet each of their individual operational requirements and optimise readiness of the F-35 Air System, including Supply Chain Management (SCM) support. The F-35 JPO intends to take maximum advantage of existing public and private capabilities to achieve the balance between affordability and performance. In that light, the following areas represent the SCM functions under consideration for competition:

a. Shipping Containers
b. Deactivation, Demilitarisation & Disposal
c. Regional Warehousing
d. Transportation & Distribution Services for Spares

Support Equipment: The F-35 JPO wants to identify companies with the capability to manufacture and/or supply various items of ground support equipment. The JPO will consider various types of manufacturing processes to support the F-35 JPO maintenance tasks, including but not limited to mechanical/weldments, electrical, and critical machining. Along with SE, various types of tools will be required, such as torque wrenches, screwdrivers, adapters, and gauges. The following areas represent the SE functions under consideration for competition:

a. Manufacture and/or supply various F-35 Air System and Propulsion SE for USAF, USN, USMC, and cooperative international services
b. Manufacture and/or supply various hand tools to perform proper aircraft maintenance
c. Provide calibration capabilities for Test, Measurement and Diagnostic Equipment

Autonomic Logistics Information System: The Autonomic Logistics Information System (ALIS) is an integrated part of the F-35 Air System, providing a comprehensive tool for data collection, data analysis, decision support and action tracking. It is a single autonomic logistics solution required to satisfy all United States and Partner Nations' service needs. The requirement includes hardware, technical refresh at operational and maintenance, repair, and operations (MRO) facilities, and on-site administration of ALIS in support of all variants of the F-35 at home stations. ALIS functions under consideration for competition include: Contractor Logistics Support (CLS) administration of ALIS; Develop and deliver ALIS Administrator training

Simulation Training Services: The F-35 JPO also would like to identify companies with the capability to support F-35 training devices and provide training services at the Academic Training Center (ATC).

Australian industry interest in JSF sustainment

Tom Muir

While most of the world's major defence companies have registered their interest in attending the **JSF Sustainment Industry Day**, including many with Australian

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subsidiaries such as **Boeing**, **Lockheed Martin**, **Northrop Gruman**, **L-3**, **Thales** and so on, **Raytheon Australia** and **BAE Systems Australia** have registered independently no doubt in the expectation that they may find lucrative contracts that may make up for some of the current shortfall in opportunities at home.

As we know from the *Industry Day Supply Chain Management Overview*, reported previously, national regional warehouse locations comprise two sites in North America, two in Europe and one in Australia.

While BAE Systems Australia will likely seek other opportunities under the **JSF sustainment program**, we suspect that it will go hard for those aspects of **supply chain management** (SCM) concerned with logistics management, transport, and warehousing and storage in Australia, areas where it has considerable local expertise.

BAE Systems Australia makes the point that through a national stores and distribution network of 26 sites, its warehousing services already provide effective integrated logistics support to defence, whose key capabilities include more than 1.3 million picks annually in support of workshops and units in Australia and deployed overseas, with a multi-modal distribution capability using road, rail, air and sea. The company handles stocktaking as a rolling program providing a 24/7 priority issue service.

The company also operates the **Defence National Storage and Distribution Centre** at Moorebank and the **Soldier Support Centre** at Bandiana. Current key projects include refurbishment of the Wallangarra warehouse to accommodate slow moving items from Moorebank.

Also a new process to more accurately understand inventory disposals is being introduced throughout Defence Logistics.

Raytheon Australia can boast of its very significant **training and business management capabilities** as part of what it claims to be the world's leading developer and provider of full service, integrated training solutions for government agencies and the largest commercial organisations.

We assume that it is in these fields that Raytheon's local subsidiary may be seeking JSF sustainment opportunities.

Thales Australia completes NGD pilot program

Thales Australia and the Department of Defence have announced that the Next Generation Desktop (NGD) project pilot program has been successfully completed.

The Commonwealth has also granted Second Pass approval, marking a significant step in a program that has the potential to deliver long term Strategic Reform Program savings.

The pilot involved over 700 defence users across Australia trialing a new secure desktop computer system that is simpler to use and less expensive to sustain than current systems.

Instead of multiple terminals for different networks, users will benefit from de-cluttered workspaces with one computer, one keyboard, one screen and one mouse, enabling simultaneous access to the Defence Restricted Network and Defence Secret Network on the same screen.

Thales Australia chief executive officer **Chris Jenkins** said the pilot was an effective way of gathering real-world data from a multitude of users.

"The pilot not only demonstrated the viability of this Server Based Computing solution, but also generated valuable implementation and de-risking experience across several Defence sites and networks that will prove highly beneficial as the program continues," Jenkins said.

"We have also recently completed a series of joint workshops with the customer, and are currently discussing how to proceed with full scale implementation of the NGD solution."

Prime contractor Thales Australia and a team of world-class partners including **Raytheon Trusted Computer Solutions** (RTCS), **Microsoft** and **Citrix** are currently delivering and supporting the NGD pilot program.

In its full implementation, NGD will use thin client technology to replace traditional desktops, which will substantially reduce hardware, power and sustainment costs for Defence.

Defence Trade Controls Bill passed

The government says Australia's Defence Industry will be better placed to trade with the US in Defence goods, services and technology with the passage through Parliament recently of the Defence Trade Controls Bill.

The Bill implements the Australia-US Defense Trade Cooperation Treaty and strengthens Australia's export controls to bring them into line with international best practice.

The Treaty was signed in 2007. In September 2010, the US Senate recommended that the Treaty be ratified. The Treaty will improve the structure for two-way trade between Australia and the US in Defence goods, services and technology without the need for individual export permits. This will be achieved by establishing an Approved Community of Government facilities and private companies in both countries.

The Treaty will mean: reduced delivery time for new Defence projects; improved sustainment by permitting transfers within the **Approved Community** without further US approvals; improved business opportunities by permitting Australian and US companies to share technical data without permit, and greater opportunities for Australian companies to participate in US contracts.

Eliminating identified gaps in Australia's export control system will align Australia with the accepted best practice of the export control regimes that Australia belongs to, and contribute to international efforts to prevent proliferation.

The strengthened export controls relate to those Defence and strategic goods that already require a Defence permit if exported from Australia in physical form due to the risk they pose to international security and weapons proliferation.

The legislation introduces a permit system for the electronic supply (such as by email or fax) of technology to a person overseas that would enable them to develop, produce or use these goods. This includes technology that could be used to make Weapons of Mass Destruction such as chemical, biological, nuclear and other weapons. Brokering the supply of these goods and technology will also require a permit.

Universities concerns alleviated?

The Australian government says it will work closely with University and research sectors to ensure the effective implementation of the strengthened export

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controls contained in the Defence Trade Controls Bill, passed by Parliament last week, Defence Minister Stephen Smith and Defence Materiel Minister Jason Clare recently said.

"We welcome the **Universities Australia** response to the passage of the Bill and its support for the Bill's implementation arrangements. The Government will work constructively with the sector to ensure Australia retains its innovative and competitive edge," Smith and Clare said.

Universities Australia, the peak body representing Australia's 39 universities, said that amendments to the Bill supported by the Government secured a number of important procedural changes, including a minimum two year trial period to be overseen by an independent Steering Group chaired by the Chief Scientist, together with strong Parliamentary oversight.

The Government thanked the University and research sectors for constructive participation in the roundtable consultation process chaired by Australia's Chief Scientist, **Professor Ian Chubb**, as well as consultations conducted by **Dr Alex Zelinsky**, the **Chief Defence Scientist**, and **Ken Peacock**.

Universities Australia welcomed the outcomes of the Chief Scientist's roundtable, which are reflected in the Bill and include: a two year transition period; the appointment of a Steering Group chaired by Australia's Chief Scientist; and a Pilot Program to monitor the effects of strengthened export controls.

ADM has reported the universities concerns with the Trade Controls Bill on more than one occasion.

Universities Australia media release on the passage of the Bill can be found **here**.

Smart move by Boeing Defence Australia

Flight instructors from Boeing subsidiary Boeing Defence Australia (BDA) recently traded their training posts at the Oakey Army Aviation Centre for Gold Coast beach patrols as part of a unique arrangement between BDA and Surf Life Saving Queensland (SLSQ).

The **Westpac Lifesaver Rescue Helicopter Service** provided three-day training sessions for 12 BDA helicopter instructors on its **EC135 aircraft**, giving them hands-on experience with the aircraft Boeing has offered in a bid for the Australian Defence Force's **Helicopter Aircrew Training System** (HATS) program. The SLSQ plans to use the funds earned from the BDA training to invest in equipment upgrades.

"The training provided an opportunity for BDA to experience the Eurocopter EC135's capabilities in a variety of real-life situations," **Mark Brownsey**, BDA Army Aviation Training and Training Support (AATTS) project manager said.

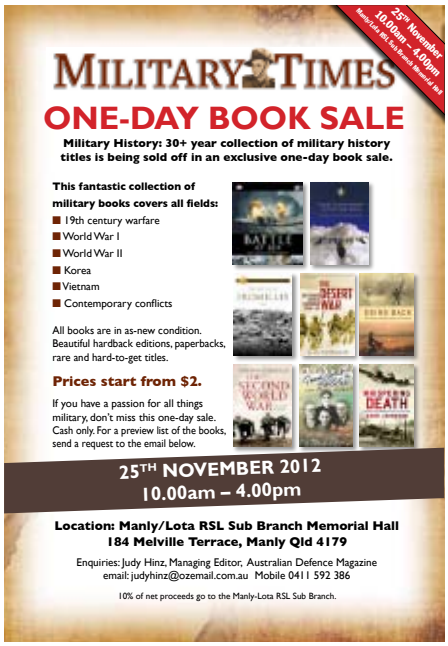
"The program is part of our pilot engagement strategy, which allows BDA instructors to update their skills on a modern aircraft to support our partnership with the Australian Army."

The BDA flight instructors on the AATTS program currently provide basic flight training to Australian Army pilots using **Kiowa aircraft**, and more than 100 pilots have graduated from the program in the past five years.

HATS is a follow-on contract to AATTS and will provide training to Royal Australian Navy and Australian Army pilots.

"The training partnership between Boeing and SLSQ has provided an excellent opportunity for our pilots to share information about this very capable, technologically advanced twin-engine aircraft," **Peter Bird**, chief pilot for the Westpac Lifesaver Rescue Helicopter Service Queensland said.

"BDA's training investment will help the SLSQ fund ongoing equipment upgrades for the service so it can continue to provide this important public service along the Gold and Sunshine coasts."



Interested in military history books? One-day sale in Brisbane

***ADM* Managing Editor Judy Hinz and husband Peter Masters (*ADM*'s Books of Interest editor for nearly 20 years) are selling off their military history books in a one day sale in Brisbane.**

Date: Sunday 25 November 2012
Time: 10.00am – 4.00 pm
Location: Manly-Lota RSL Sub-Branch Hall, 184 Melville Terrace, Manly Qld 4179
Topics include: 19th century warfare; World War I; World War II; Korea; Vietnam and contemporary conflicts. Books are in mostly 'as new' condition.

Can't make it on the day? Request a list of the books for consideration. Prices start from $2.

10% of proceeds go to the Manly-Lota RSL Sub-Branch.

Email judyhinz@ozemail.com.au for further details including a list of titles (available 15 November).

ADM Online: Weekly News Summary

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

This week in the news **Telstra** was selected as the preferred tenderer for the provision of **Terrestrial Communications Services** to Defence, following a value for money evaluation. **Joint Project 2047 Phase 3** will enable Defence users to connect to Defence networks at any time, including through wireless technologies using both Defence and personal devices.

Boeing delivered the sixth Royal Australian Air Force (RAAF) **C-17 Globemaster III** at the company's final assembly facility in Long Beach.

And, **Rheinmetall Simulation Australia** entered into an agreement with **Sydac Pty Ltd** to acquire its defence business.

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International

Five engines compete for new Shadow UAS

The US Army will select five companies this month to submit engines for testing in the service's quest to replace the current engine in the Shadow unmanned aircraft system (also in Australian service) the service's unmanned systems ground maneuver product manager said.

The UAS project management office has hired Science and Engineering Services to conduct a two-phased analysis of a new "high reliability engine" in the 45 to 60 horsepower class for Shadow, Lieutenant Colonel Scott Anderson told Inside the Army in an October 31 statement. The Shadow's engine is 38 horsepower; it weighs 39 lbs.

The analysis is 'near the end' of the first phase, Anderson said. Science and Engineering Services - based on an analysis of 12 vendors that submitted responses to a request for proposals earlier this year - will choose five vendors to continue into the second phase, Anderson said. The five vendors will be selected by November 9, he noted—*InsideDefense*

Boeing delivers fifth P-8A to US Navy

Boeing has delivered the fifth production P-8A Poseidon aircraft to the US Navy. The P-8A is one of 24 low-rate initial production (LRIP) maritime patrol aircraft that Boeing is building for the Navy as part of contracts awarded in 2011 and 2012.

"This is our final P-8A delivery of the year; we'll ramp up to 12 deliveries, including P-8I aircraft for India, in 2013," said **Chuck Dabundo**, Boeing vice president and P-8 program manager.

"As we transition to the P-8A and prepare for Initial Operational Capability in 2013, the US Navy is successfully flying the first production planes at Naval Air Station Jacksonville, Florida," said **Captain Aaron Rondeau**, US Navy P-8A Integrated Product Team lead.

The next three Poseidon aircraft are undergoing mission systems installation and checkout in Seattle, and two more are in final assembly in Renton, Washington. Boeing will deliver its sixth production P-8A to the Navy in early 2013.

The US Navy plans to purchase 117 of the Boeing 737-based P-8A anti-submarine warfare, anti-surface warfare, intelligence, surveillance and reconnaissance aircraft to replace its P-3 fleet. Australia is slated for aircraft under the program and has supported the overall program effort with both funds and personnel.

As part of the LRIP contracts, Boeing is also providing aircrew and maintenance training for the US Navy, in addition to logistics support, spares, support equipment and tools.

Rheinmetall wins Canadian Armoured Patrol Vehicles contract

Rheinmetall AG and Textron Systems Canada Inc., have announced that they have signed a €160 million ($205 million CAD) contract for work on the Canadian Forces Tactical Armoured Patrol Vehicle (TAPV) project, performed by Rheinmetall Canada Inc., Saint-Jean-sur-Richelieu, Quebec.

Rheinmetall Canada will earn €120 million ($152 million CAD) during the TAPV program's production phase – performing critical engineering and production work at its facility in Saint-Jean-sur-Richelieu, Quebec. The contract includes €40 million ($53 million CAD) Rheinmetall Canada will earn developing Integrated Logistics Support (ILS) products and as the primary in-service support hub for the vehicle fleet during its service life. It also fulfills a portion of Textron's participation in Canada's Industrial and Regional Benefits (IRB) Policy arising from the government's purchase of 500 Textron TAPVs.

During the production phase of the TAPV fleet, Rheinmetall will perform the critical final assembly and test of the vehicles. Rheinmetall will also integrate essential sub-systems such as the **Remotely Controlled Weapon Station**, the **Vehicle Navigation System** and the **Driver Vision Enhancement System**. The production phase of the acquisition contract is expected to span from July 2014 to March 2016.

Once fielded, Rheinmetall will provide **In-Service Support** (ISS) for the entire TAPV fleet, also at its facility in Saint-Jean-sur-Richelieu, Quebec.

ISS will start with Initial Operational Capability when the first 47 vehicles are delivered, planned for 2014, and is expected to end in 2021, five years after the last vehicle is delivered.

Beefed-up J models pass test

The Lockheed Martin HC-130J Combat King II and the MC-130J Commando II aircraft have been certified as effective, suitable and mission capable by the US Air Force Operational Test and Evaluation Center.

The USAF is currently recapitalising the HC, MC and AC-130 gunship fleets with new C-130J variants.

The HC-130J is the personnel recovery/combat search and rescue aircraft for Air Combat Command, and the MC-130J is the Special Operations tanker aircraft for Air Force Special Operations Command. Currently Lockheed Martin is on contract for 27 MC-130Js and 15 HC-130Js. The certification was received in October.

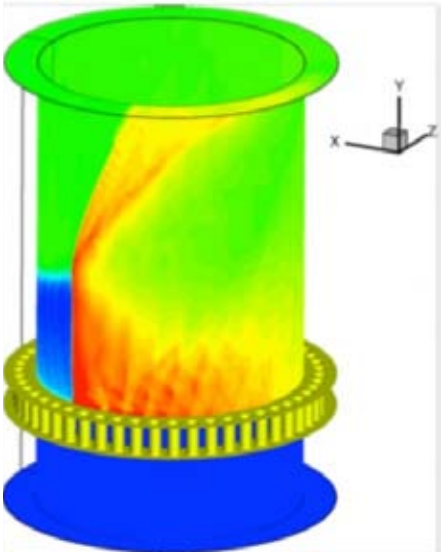
From initial contract award in mid-2008 to the first ahead-of-schedule flight on July 29, 2010, the HC/MC program demonstrates the proven design, reliability and technology of the C-130J. The new AC-130Js will be converted to MC-130Js with the addition of a precision strike package.

Argon and Smiths Detection sign five-year CBRN sim deal

Argon exclusive worldwide rights to design, manufacture and market training simulators for the Smiths Detection range of Lightweight Chemical Detectors which includes the LCD 3.2E, LCD 3.3, M4A1 JCAD, M4E1 JCAD and LCD-NEXUS detector series, of which in excess of 80,000 have been sold worldwide to date.

"The signing of this agreement which extends the existing agreement between Smiths and Argon for a further five years underpins the success and value of this arrangement to Smiths as a CBRN detector manufacturer. It also reaffirms Argon's position as world leader in the design and manufacture CBRN simulation and training systems" managing director, Steven Pike said.

"Despite these economically challenging times, it is clear Governments worldwide are placing a very high degree of importance on CBRN training which has been reflected in both contracts and new enquiries received at Argon."



US Navy looks at alternative propulsion

With around 430 gas-turbine engines on 129 of its ships burning about US$2 billion worth of fuel every year, the US Navy is examining the potential of using Rotating Detonation Engines (RDEs) to improve fuel consumption and cut costs. Researchers at the Naval Research Laboratory (NRL) estimate that retrofitting RDEs to its fleet could save the Navy approximately 300 to 400 million dollars a year.

The USN currently relies heavily on gas-turbine engines because they are self-contained, relatively easy to maintain, and relatively small, yet scalable to large powers. They are used to provide propulsion and generate electricity for many of its ships and, being fundamentally similar to the engines used in commercial airplanes, they are also used in many Navy aircraft.

Even with the move towards "all-electric" propulsion systems for future ships, the NRL says gas-turbine engines will still be needed to generate electricity for the ships' propulsion system and other critical systems.

The gas-turbine engines currently used by the Navy are based on the Brayton thermodynamic cycle, in which air is compressed and mixed with fuel and then combusted at a constant pressure. The resulting high velocity and volume gas flow is then directed through a nozzle over the turbine's blades, spinning the turbine.

The NRL says that alternatives to the Brayton cycle need to be explored to improve the performance of gas-turbine engines. For the past decade it has contributed to the development of **Pulse Detonation Engines** (PDEs), which use pulsed detonation waves to combust the fuel and oxidizer mixture, but believes RDEs may offer the potential for even greater fuel efficiency.

RDEs are similar to PDEs, but produce axial thrust by using a detonation wave that continuously travels around to detonate the incoming propellants. The RDE would offer improved efficiency over PDEs because the combustion chamber doesn't need to be purged between detonations (pulses), as is the case with PDEs.

Building on earlier work done on general detonations, the NRL researchers have constructed a model for simulating RDEs and will now focus on gaining a better understanding of how they work and what type of performance can be achieved in the real world. They believe RDEs could be a disruptive technology in ships and planes, potentially providing the ability to meet a 10 percent increase in power requirements while reducing fuel use in future Navy applications by 25 percent—*NRL/GizMag/Darren Quick*

Inmarsat provides comms coverage for Canadian naval ships

Inmarsat has announced that Shared Services Canada (SSC) will deploy FleetBroadband and new Assured Access service that will provide worldwide coverage for 29 Canadian naval vessels.

The contract to provide these services to Government of Canada is now under the responsibility of SSC. The Government of Canada established SSC in August 2011 to consolidate its data centers, telecommunications and email systems.

Deployment of these services to the Canadian Navy started in October 2012. FleetBroadband will provide the ships with global broadband connectivity while at sea – for email, internet and data services and voice communications. Since Inmarsat introduced FleetBroadband in 2007, it has been deployed on more than 30,000 commercial and government vessels worldwide.

Inmarsat's new Assured Access service grants government customers priority access to Inmarsat satellite network resources via their **Subscriber Identification Modules** (SIMs). Assured Access subscribers are guaranteed a specific grade of FleetBroadband, **Broadband Global Area Network** (BGAN) or SwiftBroadband service within pre-defined geographic areas, thereby assuring capacity and network access will be available during contingencies and crises.

FORTHCOMING EVENTS.....next page

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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

6th Submarine Institute of Australia (SIA) Biennial Conference 2012

DATE: **14-15 November 2012, The Shine Dome, Canberra**
ENQUIRIES: **David Nicholls (Executive Manager), Email execmgr@submarineinstitute.com Phone: +61 413 133 391 Fax: +61 2 6260 5416**

2012 will be a pivotal year for decisions concerning submarines. With the recent announcement of $214m in funding for the Future Submarine Program and a significant boost in Sustainment funding for the Collins class, the SIA is grasping the opportunity to present powerful arguments to contribute to the development of the 2013 Defence White Paper against the most challenging budgetary circumstances for Defence since 1938. Delegates to the 6th Biennial Conference will hear from a range of influential speakers from Government, overseas and both the Public and Private sectors as they discuss the pivotal considerations for Australia's submarine capability.

ADM's Social Media in the Defence Environment

DATE: **5-6 December 2012, Hotel Realm, Canberra**
ENQUIRIES: **ADM Events - Jamie Burrage, Ph: 02 9080 4321;**
Email: jamie.burrage@informa.com.au Web: www.admevents.com.au

Social media in the private sector has been a bumpy journey, where companies tread a fine line between credibility and ridicule whilst getting their policies right. In the public sector, and Defence in particularly, the evolution of social media has created opportunities, whilst also highlighting the need for social media policies. This inaugural conference will examine the opportunities that social media can bring to the Australian Defence Force and the Department of Defence. By mitigating the dangers of misuse, social media can be an excellent tool for announcements, for recruitment, for connecting and for selling. There is no denying the place of social media in the modern workforce. Hear speakers discuss what tools and policies can help harness social media into an essential part of the Defence workplace.

ADM2013: 10th Annual ADM Defence/Industry Congress

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

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

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Avalon 2013: Australian International Airshow and Aerospace & Defence Exposition

DATE: **26 February - 03 March 2013, Avalon Airport, Geelong**

ENQUIRIES: **Aerospace Maritime Defence Association Ph 03 5282 0500;**
Email: airshow@amda.com.au; Web: http://www.airshow.net.au

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