



DEFENCE WEEK

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Minister announces AWD review at ADM2014 conference

Julian Kerr | Canberra

An independent review of the \$8 billion Air Warfare Destroyer (AWD) program will be headed by former US Navy Secretary Don Winter, Defence Minister David Johnston announced at the ADM2014 Congress in Canberra on 25 February.

Professor Winter, Secretary of the US Navy from 2006 to 2009 and now Professor for Engineering Practice at the University of Michigan, will be assisted by **Dr John White**, a former head of the Anzac frigate shipbuilding project.

Senator Johnson said the review would examine all aspects of AWD performance including cost, schedule and quality, to identify the factors that had been limiting performance and recommend how these factors could be remediated or mitigated.

The review would be presented to government for consideration around mid-year.

The decision to establish the review was announced last December following the release of an **Australian National Audit Office (ANAO)** report, which disclosed that 2012-13 expenditure on the AWD program exceeded the \$618 million budget by \$106 million or about 17 per cent.

Addressing the Congress later in the day, **ASC** managing director **Stephen Ludlam** referred to a challenging schedule for the first of the three AWDs due to technical integrity and design issues, scope moving from earlier construction phases, and defects in subcontractor-manufactured hull blocks. However, a suite of matrix based on the First Marine International (FMI) productivity benchmark had been implemented, with real evidence of improvement and clear targets ahead.

The Minister limited his remarks on the so-called "**Valley of Death**" facing Australian naval shipbuilding to acknowledging the



significance of the challenge and confirming the existence of a yet to be disclosed plan involving a whole-of-government approach.

This would be integrated with planning to extend the service life of the **Collins class submarine fleet**.

BAE Systems Australia managing director **David Allott** confirmed that work at the company's Williamstown shipyard would finish next year. Unless further work was provided, staff layoffs would begin at the end of this quarter and the shipyard would be closed by the end of 2015 - a capability whose re-establishment would probably be cost-prohibitive.

Forgacs CEO **Lindsay Stratton** pointed out that the company had closed its Brisbane dry dock to commercial refits last year, its Carrington (Newcastle) shipyard would close at the end of this year, and its main shipyard at Tomago would close at the end of next year, with the loss of more than 900 jobs, unless decisions were taken "very, very soon".

Neatly encapsulating the issue, **ASPI** senior analyst **Dr Andrew Davies** said the government had to ask itself, strategically, whether it wanted a naval shipbuilding industry in Australia.

"If the answer is yes, then you must do something about it. If the answer is no, that's fine, then everyone will sell off their assets and restructure and do what commercial entities do. But don't complain in 10 years' time when you can't build a submarine".

Assistant Defence Minister **Stuart Robert** said he and Senator Johnston would be lobbying very strongly for the armoured combat vehicles to be acquired under Project Land 400 - currently costed at about \$10 billion - to be either manufactured or assembled in Australia.

"Just because the government will be mandating the vehicles are military-off-the-shelf does not mean that the vehicles will be simply imported into Australia," he commented, also confirming that the government would consider paying a premium for Australian-manufactured equipment because of the flow-on effects.

Foreshadowing the upcoming externally-led First Principles review of Defence, DMO head Warren King said his organisation needed greater workforce agility, a stronger performance culture and more collaboration with industry.

It also needed the ability to deliver better outcomes with fewer people, although the workforce this year was less than 6,600, or about the same as when DMO became a prescribed agency in 2005.

Dr Mark Thomson, Budget and Management program director at the Australian Strategic Policy Institute (ASPI), disclosed that the 2013-14 portfolio additional estimated statements showed that while the 2013-14 Defence budget had been increased by \$360 million and 2014-15 expenditure was up by \$304 million, \$1.1 billion had been 'rephased' from 2015-16 and 2016-17.

There was no fundamental economic reason why Australia could not afford to maintain a defence force of the size and shape it has today out to at least 2050, or build a larger force if need be.

This was simply a question of accepting the opportunity cost in health, education, welfare, and in private consumption, Dr Thomson said. However, he warned that the desired level of defence expenditure envisaged in six White Papers as a percentage of GDP had only been delivered once (The "Our Future Defence Force" White Paper of 2000).

"Fiscal problems represent political rather than economic constraint on the government's freedom of action," he noted.





CAE King Air 350 full-flight simulator to support Royal Australian Air Force certified to Level D

Full flight simulator training begins in Victoria

Julian Kerr | Sale

Defence Minister David Johnston says he will use the innovative COCO (contractor owned/contractor operated) agreement utilised by the DMO for a new CAE full flight simulator as a benchmark for what he hopes will be more of the same contracting model.

Speaking in Sale at the official opening of CAE Australia's **5000 Series simulator** configured to replicate the **Proline II cockpit** of 32 Squadron's **Beech King Air 350**

aircraft, Senator Johnston pointed out that the facility had been completed just 15 months after contract signature.

"I'll be using it as a benchmark because the timing, the cost-effective nature of it I think has been exemplary and I'll be saying why can't we do it like the COCO model down in Sale," he told *ADM*.

Under the COCO contract, worth \$14.2 million over five years, CAE will provide 1,500 hours of simulator service per year to the ADF through to the planned withdrawal of the King Air 350 in mid-2018, and can also utilise it for commercial clients.

The simulator has been certified by **CASA to Level D**, the highest qualification for flight simulators and is providing initial conversion and currency flight training for 32 Squadron pilots, as well as undergraduate training for RAAF Air Combat Officers and RAN Aviation Warfare Officers.

The simulator includes high fidelity databases of the Sale area as well as other ADF operating bases, and can be expanded or reconfigured to meet future needs and requirements.

In addition to basic flight and emergency procedures, the simulator is being used for tactical navigation training, tactical support, maritime surveillance and light transport.

CEA moved a full flight simulator replicating the Proline 21 cockpit of the King Air 350s flown by 38 Squadron in Townsville from Melbourne to Dallas last year after it failed to attract sufficient Defence business.

Answering questions, Senator Johnston said he was aware that 38 Squadron pilots continued to receive their training in Wichita, Kansas.

"I'm aware of that and it does concern me a little but I'm sure there's a good reason," he commented.



Australian sovereignty and P-8A mission software



Tom Muir

The announcement that this country is finally to acquire eight new Poseidon P-8A maritime surveillance aircraft, at a cost of some \$4 billion, as part replacements for the 19 strong AP-3C Orion fleet, comes as no great surprise.

Back in 2007 the former Coalition government gave initial approval to acquire the Poseidon and this country subsequently contributed \$150 million to join the P-8A development program, followed by a further \$100 million investment in the program. The deal includes an option for another four aircraft.

In his joint announcement with Defence Minister Senator **David Johnston**, Prime Minister **Tony Abbott** said they expected the first one to be operational by 2017. It is anticipated that in Australian service, the new aircraft will eventually operate in conjunction with proposed unmanned surveillance aircraft in an anticipated \$7 billion upgrade to maritime surveillance capabilities.

Like the Orion, the P-8A has advanced sensors and mission systems. These include an advanced multi-mode radar, a high definition electro-optic camera, an acoustic system (that has four times the processing capacity of the current AP-3C's system) and an advanced **ESM system** that is a derivative of the system fitted to the **EA-18G Growler**. Not mentioned in the RAAF's description is the P-8A's **Mission Computer and Display System (MCDS)** developed by **BAE Systems** under contract to **Boeing**.

Seen as the P-8A's digital backbone the MCDS is a ruggedised processing platform that provides an interface to all sensors, communication links, countermeasures, aircraft subsystems, and weaponry on board. Through use of the MCDS pilot and crews receive display data and a broad range of capabilities for SAR, ASW, and disaster recovery missions over land and water.

The MCDS suite comprises two high-performance servers and five dual-mission workstations that are lighter and less expensive than currently fielded mission

computers. The suite can be tailored to individual users, enhancing mission performance and endurance. Additionally, the suite's modular, open-systems architecture leverages **COTS** designs for military environments, enabling low cost and rapid technology insertion.

Did BAE Systems propose a derivative of this system to replace the current **DMS** in the **AP-3C CAP2 program**? For the AP-3C BAE Systems was responsible for developing and supporting the mission systems including the Systems Engineering Laboratory at Edinburgh, along with the **Integrated Test and Training Facility (ITTF)**, which includes the 'back end' **Operational Mission Simulator (OMS)**. It would be vital that the RAAF P-8As could be rapidly configured to current and future mission roles without compromise to Australian sovereign rights in a similar facility.

But there may be complications in regard to P-8A software management insofar as the aircraft is based on a Boeing commercial design so consideration must be given to software data rights and issues of proprietary properties. It is also designed to be a **Multimission Aircraft (MMA)**, including ISR missions that will deal with sensitive and classified data, and will likely employ classified software programs from US **Naval Air Systems Command (NAVAIR)** some of which may require modification to suit Australian requirements. Flight software will need to be scrutinised by Australian civil and military authorities for safety of flight issues.

Presumably the Australian MOU discussions (and investment) would have included the management of the various software components of the Australia P-8A fleet, comprising those of USN and commercial origin as well as those relevant to Australian specific requirements such as a non-US weapon system or sensor.

In an upgrade to the SEL and other facilities at RAAF Edinburgh, are we then likely to see a hybrid arrangement for an ADF integrated software support facility for the P-8A maintained under an alliance between **Defence (CoA)**, **Boeing (aircraft OEM)** and possibly **BAE Systems** to support the mission computing systems. But who will be responsible for supporting **USN software**? The DMO as NAVAIR agent?

In the US, there are four different software testing facilities available for the P-8A including the Mission Systems Software Development Laboratory (SDL). Perhaps an outposted USN SDL in Edinburgh SA will meet our interoperable needs?

REGISTER NOW!

ADM Cyber Security Summit

19-20 June 2014 | Canberra

This year's speaker faculty will feature presentations from renowned experts from government, industry institutions/agencies, academia and leading vendors. Some of the key topics to be addressed include:

- Cyber warfare
- Mitigating and preventing cyber offensives
- Protecting critical cyber infrastructure
- Intelligence and surveillance
- Cyber terrorism
- International Policy



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February 28



ADM/DMO awards recognise Defence and industry teams

A team working to improve missile defence for the Australian Defence Force (ADF) has, for the second time, claimed the major title in the ADM/DMO Team of the Year Awards.

The 2014 Awards, announced in Canberra this week, recognise outstanding teamwork and project management across the **Defence Materiel Organisation (DMO)** and industry.

Defence Minister Senator **David Johnston** and the Assistant Minister for Defence, **Stuart Robert**, congratulated the successful Defence and industry teams.

“Working in Defence and industry often goes unacknowledged, and the ADM Awards provide us with an opportune moment to recognise and celebrate hard work and success,” Senator Johnston said.

“These successful Defence and industry teams have proven their outstanding project management skills and the value of government and industry collaboration and perseverance.”

The **Anti-Ship Missile Defence (ASMD) project office** in conjunction with **BAE Systems, Saab Systems** and **CEA Technologies** won the **Essington Lewis Trophy** for the **Major Company/DMO Project Team of the Year**.

Senator Johnston explained just how far this project has come.

“ASMD was once a project of concern, but now it is living proof of what Australian industry and Defence can do in high technology areas when they work together effectively,” Minister Johnston said.

“It is a great pleasure to acknowledge all involved in this highly successful program.”

Assistant Minister for Defence Stuart Robert acknowledged the efforts of the DMO and industry teams.

“Their tireless efforts have also helped to ensure our serving men and women have the equipment they need, when they need it, to do their jobs,” Robert said.

2014 ADM Award winners are:



Major Company/DMO Project Team of the Year / Essington Lewis Trophy for the Major Company/DMO Project Team of the Year.

Anti-Ship Missile Defence (ASMD) project office in conjunction with BAE Systems, Saab Systems and CEA Technologies





Outstanding Achievement in Rapid Acquisition / Essington Lewis Trophy for Excellence in Collaboration between a SME and the DMO

The DMO's Patrol-based Persistent Surveillance Systems Project Team and Rockwell Collins Australia



Outstanding Achievement in Major Acquisition

The DMO's Land 121 Phase 3A project team and Mercedes-Benz Australia/Pacific

Outstanding Achievement in Minor Project

The DMO's AMP002.12 Project Team and Thales Australia

Outstanding Achievement in Sustainment and Logistic Support

The DMO's Anzac Systems Program Office and Naval Ship Management Australia

Congratulating the winners and finalists, the DMO's Chief Executive Officer, Warren King, said the *ADM/DMO Awards* are a great opportunity to reflect on the hard work and success of Defence and industry.

"These successful projects are sound examples of the dedication of Defence and industry personnel and the critical contribution we make to the Australian Defence Force," King said.

For more [conference](#) and [dinner](#) photos click on the links.



FOREX casts shadow on project costs

Tom Muir

The latest Defence additional estimates shows the part that foreign exchange differences play in the costing of major defence projects. These are exemplified in those acquisitions based on FMS arrangements and reflect the fall in the Australian dollar from near parity with its US counterpart to its current level, hovering around the US\$.89 cents mark.

But beside cost increases in some acquisitions, or reductions in decreases in others, many projects report drops in their cost estimates for the current year, sometimes due to changes in project scope or project deferrals.

An example of cost increases due in part to FOREX and in part to changes to project scope is the **AIR 5349/3 Growler Airborne Electronic Attack Capability**. Several FMS cases were signed with the USG for the 12 new-build Growler aircraft and associated systems; Anti-Radiation Missiles and initial training for Growler aircrew as well as maintainer training. The first Growler training with the USN commenced in November 2013. The variation from the original budget estimate for expenditure in 2013-14 of \$90m to \$291m, an increase of \$201m, was due to the decision to switch from converting existing Super Hornet aircraft to the acquisition of new-build Growler aircraft. The variation included a \$27m FOREX component.

Conversely **AIR 5402 Air-to-Air Refuelling Capability** reported a reduction of \$32m in cost estimates for 2013-14 due to delays in completion of milestones for operational testing of aerial boom and pod refuelling systems, delays to delivery of spares and a reduction in the reimbursement of RAAF costs for alternative tanker and air logistics services arising from project delays. This was partially offset by a \$4m FOREX component.

JP2072/3A Battlespace Communications Land shows a significant reduction of \$37m in this year's estimates due largely to the deferral of Combat Net Radio and equipment and key crypto devices to 2014-15. But that variation would have been -\$48m but for a FOREX offset of \$11.6m.

Somewhat baffling to the lay reader is the report for **AIR 9000/8 Multi Role Helicopter** which revealed an increase of \$40m over estimated costs for the current year reportedly due to 'the improved performance of the support arrangements (+\$19m) and FOREX (+\$21m)'.

Conference reports now on ADM's website **NEW!**

To access ADM conference reports from the last four conferences go to the ADM website and click on the "articles" tab and then find the "conference report" option.





Land 400 – what industry wants to know

Tom Muir

Our somewhat lightweight ‘chewing-the-cud’ style narrative in last week’s issue, headed rather grandly ‘The Strategy behind Land 400’ drew an

immediate response from an interested industry observer who was keen to have answers to the following questions:

- What are the L400 capability options to be presented at 1st Pass.
- What is the L400 schedule/key milestones between now and 2nd Pass including a date for 1st Pass Consideration by Cabinet/Approval?
- What is the proposed Land 400 BOP within the Plan Beersheba organisation structure of three like Brigades?
- Will industry have an opportunity to comment on the FPS/capability requirement documents prior to any RFT release?
- What is the Australian Industry Capability policy/requirement?
- What does MOTS Design mean?
- How important is US interoperability given the US pivot into region?
- Based on the Government’s forecast spending cuts, where is the money?

Note: ADM welcomes your response.



PMV capability for Beersheba’s MCBs

As part of the changes taking place within the Australian Army under the Plan Beersheba imperative and the concept of the new Multirole Combat Brigades (MCB), soldiers from Darwin’s 1 Combat Service Support Battalion (1CSSB) are building a Protected Military Vehicle capability to provide protected battlefield mobility for combat soldiers.

Personnel from 1Tpt Sqn have started training to meet the PMV needs of 1 Brigade. As the first combat service support battalion to make these changes, their newly gained procedures will be used by 3CSSB and 7CSSB transport personnel, as well as informing the development of training packages at the School of Transport.

OC 1 Tpt Sqn Maj **Dean Clark** said the change enabled 1CSSB to provide transport



support to 1 Bde in a variety of threat environments. "With the initial delivery of vehicles now complete, the focus of our drivers is the development of individual and section-level skills in preparation for future exercises and operations. In recent years, the PMV has been employed in a variety of roles, but its use within the battalion was focused on providing administrative movement support to the multi role combat brigades. This role enables commanders to quickly transport combat troops across the area of operations in accordance with their scheme of manoeuvre."

The **2013 Defence White Paper** reaffirmed the government's commitment to Army's reorganisation under Plan Beersheba from the three specialised brigades into three 'like' multi role combat brigades based in Darwin, Townsville and Brisbane, each of which will have fundamentally common structures containing all elements of the combined arms team. Each brigade will comprise two **standard infantry battalions (SIBs)** together with an **Armoured Cavalry Regiment (ACR)** that includes a tank squadron, an artillery regiment, **combat signals regiment (CSR)**, **combat engineer regiment (CER)**, and **combat service support battalion (CSSB)**.

The most significant change will involve reorganising the tanks and APCs currently centralised in the armoured, cavalry and mechanised units of the Darwin and Adelaide-based 1st Brigade into ACRs based in each brigade's location.



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, Singapore Technologies Kinetics appointed **APC Technology** as its Australian Representative promoting their range of military vehicles including the Terrex 8x8, Bronco ATTC and CAV.

Northrop Grumman Corporation has awarded contracts to several Australian suppliers as the company continues to grow its footprint in the country.

In his first **visit to Australia**, the Afghan Minister for Defence, Bismullah Khan Mohammadi, met with Defence Minister David Johnston in Canberra.

And, the Government has approved the acquisition of eight **P-8A Poseidon maritime surveillance aircraft**.

International

USAF's large aircraft self-protection plans

Tom Muir

The US Air Force has announced plans to launch - as soon as April - a competition for a project it hopes will bolster the self-protection capabilities of its large aircraft, which could spell new business opportunities for firms like Northrop Grumman and BAE Systems, already cleared by the US Defense Department on the secretive business of US military aircraft vulnerabilities.

The new program follows recommendations made by an **Air Force Scientific Advisory Board** task force commissioned to evaluate new threats to large aircraft - including the **C-5**, the **C-17**, and the **C-130J** - that sometimes move slowly at low altitudes while executing their mission. The board issued a classified study last year recommending that the service upgrade its existing countermeasures and develop new technologies.

Last week, the **US Air Force Research Laboratory's** sensors directorate unveiled plans for the **"Threat Warning and Countermeasures" (TWCM)** program by advising industry of its intention to issue a formal solicitation for the new effort "between February and April 2014." The goal is to improve defences against missiles, lasers and hostile fire. Existing countermeasures include the **Large Aircraft Infrared Countermeasures (LAIRCM)** system. All Australian C-17s that fly into combat zones are fitted with a Large Aircraft Infrared Countermeasures (LAIRCM) system for protection against missiles.



LCS program hit by Hagel budget cutbacks

Tom Muir

The US Navy will not contract for any more than **32 Littoral Combat Ships (LCS)**, 20 less than the Navy planned for, Defence Secretary Chuck Hagel said last week in Washington.

The coastal ship has come under criticism in recent years for its lighter armament and lower survivability standard than some of the larger ships currently in the fleet. The 52-ship order planned would have meant that the ship would compose about one-sixth of the Navy.



While supporters of the program, including Secretary of the Navy **Ray Mabus**, say the LCS's top speed — upwards of 50 mph — and its low draft allow the Navy to easily go into areas it can't with its current fleet makeup, Hagel said during a news conference that the Navy was "relying too heavily on the LCS to achieve its long term goals for ship numbers."

Hagel's announcement came as he and Joint Chiefs of Staff Gen. **Martin Dempsey** outlined the Pentagon's proposals for the FY2015 defence budget. Congress still may have a say in the LCS's future, though powerful lawmakers such as Sen. **John McCain** have been critical of the LCS program in the past.

In January, acting Deputy Defence Secretary **Christine Fox**, in an unreleased memo, directed the Navy to halt LCS production after 32 ships — 20 less than planned — and begin development of a "more capable surface combatant."

Meanwhile the US Navy's beleaguered littoral combat ship program took another hit on Saturday last when the *USS Freedom* was forced back to its base in Singapore for maintenance while participating in international exercises

While the Littoral Combat Ship is barely a fixture of the Navy's fleet, the service, tasked by the Office of the Secretary of Defence, is already thinking about what's next - a future surface combatant.

"We want to look at what is out there for the future of the small surface combatants beyond LCS and we want to start that now," a senior defence official told reporters at a Pentagon budget briefing.

But the service has already begun in earnest, Inside the Navy has learned: Last year, the service kicked off a three-month war game geared toward exploring the new platform, and it is slated to begin a capabilities-based assessment in the next few months. - *TM/Stars and Stripes/InsideDefense*



Eye-in-the sky grenade round

Singapore-based ST Engineering, has developed a special 40mm grenade as part of their Soldier Parachute Aerial Reconnaissance Camera System (SPARCS). Instead of a warhead, each grenade round has a CMOS camera sending back real-time images to a computerised receiver; turning disaster teams, police, and foot soldiers into reconnaissance units.

Designed to fit any standard low velocity 40mm grenade launcher, SPARCS (also known as the S407 Round) is an alternative type of eye in the sky that ST Engineering says is low cost, simple to use, and requires no maintenance.



Aimed at military, law enforcement, and civil disaster management agencies, the internal solid-state electronics are capable of surviving being fired at 76 m/s (250 ft/s) to an altitude of 150 m (490 ft), where a parachute slows its descent. As it comes down, the camera transmits top-down view images back to a receiver, with software stitching these together in real time.

According to ST Engineering, the receiver can be any wireless device that can pick up the 2.4 GHz signal and the software is compatible with most operating systems. The images can be retransmitted to other handheld devices or back to headquarters. In addition, the receiver can be repackaged into a load-bearing vest and the images sent to a head-mounted display. - *TM/GizMag*



Same old story?

Tom Muir

Reports out of the UK on profligate defence spending will strike a chord with Australian tax payers concerned over the way APS staff cuts are replaced by well-paid contractors – sometimes the same individuals!

At the latest Public Accounts hearings in the UK, MPs have heard that UK Defence chiefs are paying hundreds of millions of pounds to consultants hired to plug a staffing gap caused by poor pay rates. Around 400 highly skilled jobs within the **Ministry of Defence (MoD)** are vacant due to “uncompetitive” pay, the Public Accounts Committee heard. Yet £400m is being spent on technical consultants brought in on contracts.

MPs were told this was a “reflection” of the current recruitment crisis at the Ministry of Defence. The department is now pressing the Treasury and Cabinet Office for greater freedom to pay more competitive salaries. It has also held talks with the Department for Transport, which faces a similar problem with its most technically skilled staff. The MoD has proposed combining the budget for consultants and the £900m spent on staff, then set its own pay rates.

‘Uncompetitive salary’

Bernard Gray, UK Chief of Defence Materiel, said it was “mad” that officials ended up covering the cost of the higher salaries workers are paid in the private sector instead of offering staff better pay.

“We pay out - when we pay these firms for technical support - significant premiums to the cost of hiring the individual,” Gray said. “So we are talking about something in the order of about 100% mark up on somebody’s time for going out and having them off our books but supplying us with services as opposed to having them on the



books.” He told the committee he had been arguing that the MoD needed to pay its staff properly so it could better manage public money saying the MoD had struggled to fill positions in engineering, commercial and project management.

Gray said the principal reason given by potential candidates was “uncompetitive salary”. A senior employee who was “running” the nuclear weapons program until last year moved to the private sector for a “50% premium”, the committee was told.

Defence chiefs admitted the department still had some way to go to change its spending culture, which has been repeatedly criticised over recent years. The National Audit Office warned earlier this month that while cost overruns were being brought under control, risks remained to the long-term affordability of the MoD’s equipment program. A report from the spending watchdog highlighted confusion over how an under-spend of £1.2bn had occurred in the equipment budget. - *TM/BBC*



GCV program dies and with it any L400 link

Tom Muir

As the US Army prepares to mothball its Ground Combat Vehicle program, questions remain regarding how it might live on as a scaled-down science and technology project.

The US Ground Combat Vehicle Program had strong similarities with this country’s proposed Land 400

Land Combat Vehicle System requirement and there had been a ‘meeting of minds’ between senior US and Australian military on the subject. At an Armoured Vehicle Conference held in Canberra some years back the US Army’s Colonel Mike Smith, director of training, doctrine and combat development, discussed how the US Army took lessons learned during operations in Iraq and Afghanistan into concepts and capabilities for the future Ground Combat Vehicle and beyond.

What must have been evident not only to Brigadier **Mal Rerden** and other then scions of Land Capability Development, such as Brigadier **Paul McLachlan** and even Major-general **John Caligari**, then Head of Army Modernisation, were the broad similarities of the systems sought for the Australian requirement and the US Army’s Ground Combat Vehicle (GCV), even to the priority for an **Infantry Fighting Vehicle (IFV)**.

But the opportunity for international collaborative development of an IFV to be pitched against **MOTS vehicles** as in the **JLTV/ Land 200/4 program** has now gone. However it is understood that the US Army still recognises a need for the vehicle and



wants to preserve some of the technology investments that have already been made. The GCV is now in the technology-development phase with competing contractors **General Dynamics Land Systems** and **BAE Systems**, but the program was dealt a serious blow earlier this year when Congress slashed its fiscal year 2014 budget request from \$592 million to only \$100 million. - *TM/Inside Defense*



FAUN Trackway - keep on moving

Chris Kendall | FAUN Trackway

For modern armed forces, the rapid and safe movement of troops is just as important as having the correct armoury and protective equipment.

Even the most advanced vehicle can become bogged down in soft ground, such as snow, sand and

marsh, posing a real risk to those on the ground. Particularly as combat and emergency relief missions move into more remote, cut-off locations, often without pre-existing roads or networks that have been damaged by natural disaster, the question of mobility becomes critical.

These factors make a robust portable temporary roadway a must for every defence force. Laid over terrain that would otherwise be difficult or impossible to traverse, these ground surfacing solutions create a smooth path for travel.

Best practice is to look for a system that has been assessed as meeting military standards. For example there are products available based on a lightweight aluminium matting that can accommodate both wheeled and tracked vehicles up to **Military Load Classification (MLC) 70**, so even very heavy vehicles can use it without detriment.

Choosing an aluminium panel solutions will offer added flexibility. Some missions may call for truncated, temporary access points, and others for extensive road networks for months at a time. Aluminium matting that can be split into shorter panels or seamlessly added to create a potentially unlimited roadway, meaning it can be tailored to meet each scenario.

Shorter panel solutions can also double up as bridge egresses. Using this matting at river banks can reinforce the ground to minimise erosion, making it more stable and easily passable.

Also consider that a roadway that needs to be laid by hand will take considerably longer and require much more effort than those which are compatible with specialist laying equipment that can be fitted to a range of vehicles commonly used by armed forces.

When time is of the essence, hard-wearing solutions that can be deployed quickly and efficiently with minimum manpower will always win out.

FORTHCOMING EVENTS.....page 16



FORTHCOMING EVENTS

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

Centenary of Military Aviation Air Show 2014

DATE: 1 - 2 March, 2014, Point Cook, Victoria

ENQUIRIES: Web: <http://www.airforce.gov.au/>

The event highlights the significant advances in military aircraft during the past 100 years.

RAAF Air Power Conference

DATE: 12 - 13 March, 2014, Canberra

ENQUIRIES: Web: www.airpower.airforce.gov.au

The Royal Australian Air Force will be conducting its biennial Air Power Conference over the period 12-13 March 2014 in Canberra at the National Convention Centre. The theme for the 2014 Conference is A Century of Military Aviation 1914 - 2014 and will focus on the grand narrative of air power development over the past one hundred years through an examination of key air power campaigns

ADM will
be in
attendance

The Submarine Choice: ASPI's International Conference

DATE: 8 - 10 April, 2014, Canberra

ENQUIRIES: Lynne Gozzard, Ph: 02 6270 5109;

Email: lynnegozzard@aspi.org.au

Join distinguished international and Australian speakers for two days of debate on Australia's Future Submarine choice.

Topics include: The Strategic Context; the Navy's Perspective; Regional Perspectives; Design Options; Industry and Economics; Project Management; Lessons from Abroad.

ADM will
be in
attendance

3rd annual ADM Cyber Security Summit

DATE: 19 - 20 June, 2014, Canberra

ENQUIRIES: ADM Events - Adam Wiltshire, Ph: 02 9080 4342;

Email: adam.wiltshire@informa.com.au

Web: www.admevents.com.au

Over the last 2 years, the summit has gathered 150+ senior Defence, National Security and Industry executives to address current and emerging cyber threats to Australia's security.

ADM will
be in
attendance

Defence and Industry (D+I) conference 2014

DATE: 29 - 30 July, 2014, Adelaide

ENQUIRIES: Defence Materiel Organisation

Email: DMO.Communication@defence.gov.au

The Conference is an opportunity for Industry to discuss with Defence officials acquisition and sustainment investment opportunities.

ADM will
be in
attendance

SimTect 2014

DATE: 25 August, 2014, Adelaide

ENQUIRIES: Web: <http://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.

ADM will
be in
attendance

Land Forces Conference 2014

DATE: 22 - 26 September, 2014, Brisbane

The Land Forces Conference is a major event for users, providers, academics, designers and manufacturers to meet, present, share and exchange new and visionary ideas on Land Systems. More details to come.

ADM will
be in
attendance

