



# DEFENCE WEEK

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## IN THIS ISSUE

### NATIONAL NEWS

RAAF Super Hornet/JSF missile plans . . .	1
The Pacific Patrol Boat program . . . . .	2
Cyber centre boss confirmed . . . . .	3
Supercomputer for DSTO's work with future sub. . . . .	4
DSTO to separate corporate and R&D . . .	5
TC Communications and ADF sign WGS contract . . . . .	5
Expanding manufacturer sets up blasting room . . . . .	6
Mediaware and Sentient team-up . . . . .	7
FireEye release Australian cyber security survey findings . . . . .	7
J&H Williams awarded the DTC Defence Industry Member Award . . . . .	8
US IOC for JSF . . . . .	8
Movement at the station . . . . .	9
ADM Online: Weekly Summary . . . . .	9

### INTERNATIONAL NEWS

US to replace M113s - we upgrade 'em . . . . .	10
Canada's LAV-III surveillance needs ..	10
ITT Exelis to provide US Navy aircraft with advanced electronic countermeasures . . . . .	11
<b>FORTHCOMING EVENTS . . . . .</b>	<b>12</b>

**DEFENCE BUSINESS  
OPPORTUNITIES. . . See separate PDF**

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## RAAF Super Hornet/JSF missile plans

Tom Muir

Back in April it was announced that Raytheon Missile Systems had received a \$US12.7 million order to integrate the new AGM-154C-1 JSOW into the F/A-18E/F aircraft's H10E Operational Flight Program (core operating system) software.

This JSOW variant can hit moving naval targets, turning the stealthy glide bomb into a short range anti-ship missile. Work is expected to be completed by February 2015.

With Norway's decision to procure the F-35, the Royal Norwegian Air Force needs a modern weapon system for its new aircraft, and has decided to develop a new missile, the **Joint Strike Missile (JSM)**, which can be carried externally and internally in the bomb bay of the F-35. A derivative of the **Kongsberg Naval Strike Missile (NSM)** the JSM missile system is designed for both **Anti Surface Warfare (ASuW)** and **Naval Fire Support (NFS)** missions in the open sea, littoral, and over land.

During hearings by the Joint Committee on Foreign Affairs, Defence and Trade, DMO's New Air Combat Capability program manager, **Air Vice Marshal Kym Osley**, discussed the JSM in response to a question from **Senator David Fawcett**. With Norway's government fully funding the JSM through F-35 integration in Block 4, it seems this country doesn't need to be involved in that aspect financially, and so far no commitments have been made regarding the JSM beyond discussing requirements.

ADM understands the near-term plan is to use the AGM-154C-1 JSOW glide bomb as the initial maritime strike weapon, first on the F/A-18F Super Hornets and next on the F-35As. It is believed that the



USAF and US Navy will also make JSOW part of F-35 Block 4, which is planned to finish in 2020 and release to the fleet in 2021.

While F-35 software development delays continue Defence anticipates JSOW being available on **F-35As** by the RAAF's own planned Full Operational Capability date, in 2023. Beyond 2023, JP 3023 will be looking at a new maritime strike platform for use across its navy surface combatants and air force (F/A-18F, F-35A, P-8A).

Norway has conducted the first vessel-to-vessel firing of the Kongsberg NSM anti-ship cruise missile equipped with a live warhead, the Norwegian Ministry of Defence (MoD) announced on 5 June. The test firing, which was carried out successfully on 4 June, saw an NSM fired from the **Skjold-class corvette KNM Steil** and strike the **Oslo-class frigate KNM Trondheim amidships** on the fore superstructure -*DID/TMI/Hansard*



## The Pacific Patrol Boat program

Tom Muir

**This week the government announced the signing of a \$21 million four-year contract with AMC Search Ltd to provide Pacific Patrol Boat (PPB) training services. AMC Search Ltd (AMCS) is the commercial arm of the Australian Maritime College, located in Launceston, Tasmania.**

The contract is for a range of technical, operational and administration courses for students from the 11 nations participating in the PPB Program. An annual suite of 16 separate training programs are to be delivered in Launceston with courses ranging in duration from 10 days to 12 weeks. AMCS will also deliver some training in individual countries. It is anticipated that approximately 140 – 160 students will undertake training each year. In addition to training delivery and assessment, AMCS will also provide 24 hour support to all PPB trainees.

The PPB program is expected to evolve under the Pacific Maritime Security Program announced in the recent Defence White Paper. So far this program has seen 22 patrol boats given to 12 nations in the Pacific between 1987 and 1997, providing Pacific Island countries with significant sovereign capability to conduct maritime surveillance and enforcement of their Exclusive Economic Zones and also assist in national search and rescue missions and disaster relief.

AMCS training provides critical operations and mariner skills to the participating Pacific states, helping build their capability to protect their borders and resources. Training provided to Pacific crews by builds a range of core skills, including: maritime technical, seamanship, communications, search and rescue, navigation and management courses.

Australia proposes to replace the current Pacific fleet from 2018 over a period of 10 years. In addition to the training program, this country Australia continues to provide a range of support services including the conduct of refits, engineering and technical services and logistic support.



## Background

The Pacific Patrol Boat Program began in the 1980s, following the declaration by Pacific island states of a 200 nautical mile exclusive economic zone (EEZ), under the UN Convention on the Law of the Sea. The Australian government announced the supply of initially 10 patrol boats to members of the Pacific Islands Forum, with the first delivered to Papua New Guinea in 1987. The program was later extended, with the final 22nd vessel being delivered in 1997. Between 1997 and 2003 a comprehensive half-life refit was conducted on each boat.

Built by **Australian Shipbuilding Industries** (later **Tenix**, now **BAE Systems Australia**) each patrol boat is 31.5 metres long and has a full load displacement of 162 tonnes. They are fitted with two Caterpillar 3516TA diesel engines, which provide 2820 horsepower to two propeller shafts, driving the vessel at a maximum of 20 knots.

The vessels have a maximum range of 2500 nautical miles at 12 knots, and can remain at sea for up to ten days.

In 2011 DMS Maritime was awarded a five-year Pacific Patrol Boat contract, providing maintenance, technical, engineering and logistics services for 19 patrol boats and refits for nine vessels under the PPB Program, with options to extend for a further 12 years.

Under the Pacific Patrol Boat Life Extension Program **Rosshaven Marine** undertook the half-life refit and life extension program of 18 vessels and the 1 off 3rd refit of Pacific Patrol Boat vessels from the Pacific nations, included the Border Defence and Police Vessels from PNG, Tonga, Samoa Vanuatu, Solomon Islands Marshall Islands and Micronesia.

The refit work involved the refurbishment of hull and structure and the refurbishment or replacement of all of the ships systems. This program has effectively doubled the life expectancy of the vessels from 15 years to 30 years allowing them to continue operation in the region until at least 2027.

Commander **Geoff Turner** RAN told the *ABC* last year that new patrol boats are to be provided to 12 Pacific Island countries over the next 10 - 15 years.



## Cyber centre boss confirmed

**At the third ADM cyber security summit this week, Major General Steve Day confirmed that he would be the first head of the new Australian Cyber Security Centre.**

He also confirmed that the funding for the centre would be drawn from the cyber security budgets of the various agencies involved in the centre. These include ASD, ASIO, AFP and Attorney-General department.

MAJGEN Day explained that 73 per cent of the workforce of the new centre would come from ASD with the balance from the contributing agencies.

Stay tuned for the full newsletter dedicated to the *ADM* cyber summit coming soon.



## Supercomputer for DSTO's work with future sub

Tom Muir

Fairfax has been quick to report that Defence is buying a \$2.2 million supercomputer to help with research for the Future Submarine program. Seattle-based Cray Inc will provide the supercomputer to the Defence Science and Technology Organisation (DSTO) by next month.

"The system will be used to undertake computational fluid dynamic studies to increase knowledge and assist the evaluation of technical risks associated with the hydrodynamic performance of future Australian navy platforms," a Defence spokesperson said. "The capacity of the system will enable large computational fluid dynamics



simulations to be performed in the order of days rather than months."

DSTO, one of Australia's longest-standing users of supercomputers, would not disclose the final specifications of the supercomputer Cray is due to deliver. However, tender documents stated the installation would be CPU-only hardware that integrates with existing network-attached storage and runs the Centos operating system. This is first time an Australian government agency has publicly gone to market with a view to procuring a modular data centre. Modular data centres can be housed in modified shipping containers. One could be used to house the supercomputer. At the time the agency noted this would be the "ideal" solution. Defence did not provide any reasons for the change in approach.

Client and vendor are expected to run performance tests to see whether the system would qualify for nomination for the biannual top 500 supercomputer list.

### 2nd annual ADM Defence Support Services Summit

**Date:** 19 September 2013, Hyatt Hotel, Canberra

**Enquiries:** Jamie Burrage, Tel: +61(2) 9080 4321;  
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## DSTO to separate corporate and R&D

In a five-year strategy released in April, DSTO highlighted flagged plans to move its corporate applications to the Defence Restricted Network, which

provides access to the department-wide intranet and about 3,000 applications, and is managed by the department's Chief Information Officer Group (CIOG)

We understand DSTO plans to work with the CIOG to move its corporate applications by the end of the 2015-16 financial year. It planned to develop and maintain separate networks to support its research efforts, presumably such as the **Future Submarine Program**, as part of a more detailed ICT strategy and operational plan to be developed later in 2013.

Key outcomes to be delivered in the first year of the strategy included: improving governance, architecting and management of IT; improved video conferencing capabilities and improved wired and wireless access to classified and unclassified networks. By 2014-15, the organisation also expected to deliver improved support for a broader range of ICT platforms and improved collaboration tools-TM/Fairfax



## TC Communications and ADF sign WGS contract

TC Communications has signed another contract to provide service and support to the ADF in their project to deploy integrated

**Wideband Global Satellite (WGS) communications capability into the ADF.**

Minister for Defence Materiel, **Dr Mike Kelly**, announced that Defence had signed two multi-million dollar contracts for the supply and support of satellite terminals to the ADF. TC partnered with **L-3 Oceania** in this program which will see L-3 Oceania providing 51 terminals, 30 deployment kits, spares and test equipment at a value of approximately \$38.5 million.

TC Communications is involved in a separate, performance based in-service support contract that provides logistics support, engineering services, supply support services and maintenance services.

This contract follows on from another WGS contract that saw a partnership between TC Communications and Bridge Networks deliver the first WGS anchor earth stations via the **JP 2008 Phase 4 project**. TC also provides all training and support functions, including engineering support, under a multi-year contract for Phase 4 of the JP2008



project.

In 2007 the Australian government announced that they would fund a sixth WGS under an agreement to access the US satellite communications system. This agreement sought to strengthen the Australian–US alliance and enhance the communication capability of the military by delivering access to the WGS constellation of satellites with their global coverage, increased wideband capacity and operational flexibility. The WGS program directly contributes to the ADF fulfilling the **Network Centric Warfare Roadmap** aims of becoming a network enabled force by 2016.

The signing of this contract under JP 2008 Phase 3H will expand the use of the WGS system by introducing medium sized WGS-certifiable transportable satellite terminals to ADF land forces – thus allowing earlier use of enhanced satellite communications services in Australia and in key operational areas where commercial satellite resources are limited.



## Expanding manufacturer sets up blasting room

**Sevaan Group has set up its own blast room, adding a powder coating facility to increase scope for new orders across the industry spectrum.**

This new facility, according to chief executive officer **Tony Panrucker**, perfectly complements what is already happening on the fabrication floor and

machining department of this fast-growing manufacturer.

It allows it to further expand influence with the Defence industry, engineering, railways, mining, construction and general fabrication sectors.

“Manufacturing engineered components for our clients is a lot more streamlined and cost-effective, when we have our very own blast room to complement our existing powder coating plant to eliminate double handling and our ability to complete orders far more quickly,” Panrucker said.

“While outsourcing this function has served us well in the past, we now have complete control of all aspects of the order to offer our customer base reduced waiting periods for their products, allowing them to plan more efficiently.

Sevaan Group’s blast room is complete with a magnetic separator which facilitates multiple blasting medium to speed up changes of medium for different material types. The blast room efficiently feeds product to our powder coating and wet paint line.

The 6.0 metre x 2.4m blast room is a further facility to enhance the company’s chemical pre-treatment area and powder coating line.



## Mediaware and Sentient team-up

Mediaware and Sentient Vision Systems Pty Ltd have created a technical partnership which combines Sentient's Kestrel Land and Maritime target-detection software with General Dynamics Mediaware's D-VEX next-generation tactical video-exploitation system. This plug-in feature provides surveillance system operators and analysts with improved real-time situational awareness and strengthens post-mission forensic analysis and intelligence reporting.

"While working together on the Australian Defence Force's **Shadow 200 Tactical Unmanned Aerial Systems program**, it was clear to us that Sentient's Kestrel software integrates easily and strengthens the end-to-end video-exploitation capabilities of our D-VEX system," **Dr Kevin Moore**, chief technology officer at General Dynamics Mediaware said.

"Combining these two technologies creates a powerful tool for detecting, analyzing and reporting moving targets in both the maritime search and rescue and battlefield environments."

D-VEX is a video-exploitation system that captures and manages full-motion video, providing operators with intuitive tools for enhancing, streamlining and analysing live and recorded video. When coupled with Sentient's Kestrel real-time automatic detection software, which allows users to identify small, hard-to-find moving targets in electro-optical and infrared aerial live video streams, mission operators and analysts can quickly transform raw video data into actionable intelligence. Leveraging the companies' extensive experience in advanced full-motion video, the combined systems simplify the post-mission forensic analysis of video.

This product collaboration with Sentient's automated detection and D-VEX's intelligent video technology enables customers to extract significant value from the large volumes of full motion video captured from sensors deployed in the field.



## FireEye release Australian cyber security survey findings

FireEye has released their findings from a comprehensive survey of the state of Australia's cyber security as seen by executives and technical staff

across a range of organisations.

The survey, conducted by the **Ponemon Institute**, found that 62 per cent of executives reported experiencing a data breach while 74 per cent of technical staff, those on the frontline, said their organisation had been breached. Only 50 per cent of executives and even fewer technical staff (42 per cent) believed that their budget was adequate for achieving a strong cyber security posture. The theft of intellectual property (IP) also proved to be a central concern with a significant majority of executives (72 per cent) and technical staff (70 per cent) reporting that they were "most concerned" about



protecting this data. These figures were 20 per cent higher than concern reported for the protection of customer information.

The two fastest growing threats, according to respondents were denial of service (DDoS)/botnets with 51 per cent of respondents reporting an increase and advanced malware/zero day attacks with 38 per cent reporting an increase.

"This survey draws back the curtain on the state of Australian cyber security even further," **Phil Vasic**, FireEye's regional director A/NZ said. "It shows in no uncertain terms that attacks are prevalent and largely unreported. It also underscores that Australian organisations are increasingly facing threats that they are often poorly equipped to deal with and that there is a gap between what those in the board room believe about their cyber security and what those on the front line see."

259 Australian C-level executives and technical staff were surveyed from organisations ranging from less than 1,000 to more than 75,000 employees globally in sectors from financial services to education.



## J&H Williams awarded the DTC Defence Industry Member Award

**J&H Williams has received the DTC Defence Industry Member Award for Outstanding Small and Medium Enterprise (SME).**

The award recognises an SME that has excelled in their engagement with the defence industry to build their capability and capacity to work in defence.

"To be recognised by the defence industry is a great honour for our company" Craig Williams, managing director of J&H Williams said.

J&H Williams's manufacturing capabilities have been successfully adapted to the defence sector by way of optimising the fundamental manufacturing practices in the business and aligning them with most current operations, quality and production strategies.

Williams added that the defence industry was a key part of their strategy for the future growth of the company.



## US IOC for JSF

**The US Navy, Air Force and Marine Corps have delivered a joint report to US Congressional defence committees establishing the initial operational capability (IOC) of each service's F-35 Lightning II Joint Strike Fighters.**

The report provides the initial



capability requirements and the expected availability dates for the Joint Strike Fighters being prepared for each military service. Based on the F-35 Joint Program Office schedule, the US Marine Corps F-35B will reach the IOC milestone by December 2015, while the Air Force F-35A will reach the IOC milestone by December 2016. The F-35C, attached to Navy carrier air wings, will reach the IOC milestone by February 2019.

**Quickstep**, which has been selected to supply JSF parts worth up to \$700 million over the next 20 years are pleased that the program now has confirmed IOC dates.

"The joint announcement, together with the US Air Force's planned procurement quantities FY 2014, highlights that the JSF program is on track and increases the certainty of anticipated production orders for Quickstep" Quickstep managing director **Philippe Odouard** said. "Having commenced delivery of JSF parts in April 2012, and following the recent Northrop Grumman announcement of full qualification of the Bankstown site, Quickstep is now increasing JSF production to achieve peak production rates of approximately \$40 million per annum by 2018."

The JSF program is being developed for the US and eight international partner nations, including Australia. Two additional countries, Japan and Israel, have recently selected the JSF for their armed forces.

## Movement at the station

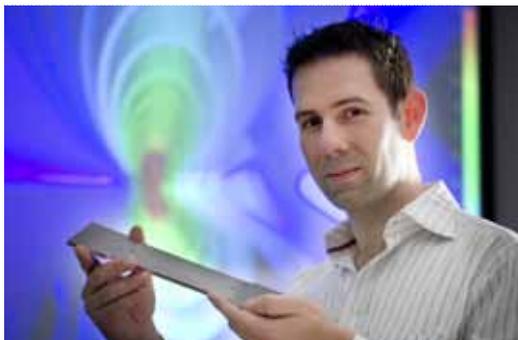
**Northrop Grumman Corporation has appointed Ian Irving as chief executive for Australia, effective July 15.**

Irving holds a number of professional memberships with organisations including the **Australian Institute of Project Management**, the **Submarine Institute of Australia**, and the **Sydney Aerospace & Defence Interest Group**.

Northrop Grumman is a supplier in the defence, security, information systems and public safety communications markets providing a range of capabilities and technologies, including serving as a key subcontractor for the **Wedgetail airborne early warning and control, F-35 Lightning II** and **FA/18 Super Hornet programs**. In 2012, Northrop Grumman acquired **M5 Network Security**, a Canberra-based provider of cyber security and secure mobile communications to Australian military and intelligence organisations.

**NewSat Limited**, Australia's satellite company, has appointed **Scott Sprague** as chief commercial officer.

As chief commercial officer, Scott's extensive satellite knowledge and strategic management experience will greatly assist NewSat's next phase of growth and future business success.



## 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, **Dr Chris Wallbrink** from the Defence Science and Technology Organisation (DSTO) an aerospace engineer whose work supports the safe operation of the Australian Defence Force air fleet has become the first Australian to receive the international Jaap Schijve award for young aeronautical researchers.

The BAE Systems' **Terrier** Combat Engineer Vehicle has been accepted into service by the British Army.

Bell Helicopter's Bell **V-280 Valor** has been selected by the US Army for the Joint Multi-Role (JMR) Technology Demonstrator (TD) program.

## International



### US to replace M113s - we upgrade 'em

Tom Muir

**A formal request for proposals for the US Army's Armoured Multi-**

**Purpose Vehicle that was expected this month has been delayed until July 22, the service said last week. While no reason was given for the delay, an Army official ascribed the schedule slip to difficulties associated with managing long-term programs amid the budget uncertainty the service currently faces.**

The AMPV is intended to be the Army's replacement for nearly 3,000 of its Vietnam-era M113 infantry carriers. Each vehicle has an average unit manufacturing cost target of \$US1.8 million, according to Army slides from an April 23 industry day held in Warren, MI. At that rate, the total AMPV price tag could exceed \$US5 billion.

**M113 Armoured Personnel Carriers** have provided the Australian Defence Force with a protected mobility capability since the Vietnam War. The **Land 106 M113 APC** upgrade included an electrically powered turret, day/night weapon sights, a new engine, steering controls, drive train, electrical and fuel systems as well as a newly designed internal layout to accommodate safe stowage.

Some 431 **M113A4 vehicles** in seven variants, applique armour and ILS, have been delivered and project closure has commenced. Approved project expenditure was \$885 million of which \$791 million has been spent to date. Upgrade contractor was **Tenix**, later **BAE Systems Australia**.-*Inside Defense/DMO*.



### Canada's LAV-III surveillance needs

**Canada's effort to upgrade its LAV-III armoured personnel carriers has drawn interest from several companies seeking work on the program's LAV**



**Reconnaissance Surveillance System (LRSS).** During the CANSEC exposition in Ottawa, L-3 Wescam and Raytheon each unveiled their prototypes for the project, which is being led by LAV-III builder General Dynamics Land Systems Canada (GDLS-C).

In Australia, under **Land 112**, the ASLAV Surveillance Project will provide an integrated sensor-based surveillance capability for ASLAV Surveillance variants. The Multi Spectral Surveillance Suites is a mast mounted radar and electro-optic surveillance system to be fully integrated on the ASLAV-Surveillance variant. The contractor for the delivery and integration of the suite is US company **DRS Sustainment Systems**. The project is currently involved in the production, testing and delivery of 18 Multi Spectral Surveillance Suites units. Full materiel release was due in April 2013-*Janes/DMO*



## ITT Exelis to provide US Navy aircraft with advanced electronic countermeasures

ITT Exelis has been awarded a contract valued at more than \$US125 million by

Naval Air Systems Command in Patuxent River, Md., to deliver the latest variant of the AN/ALQ-214 airborne jammer.

The AN/ALQ-214 is a subsystem of the **Integrated Defensive Electronic Countermeasures (IDECM) suite**. Under this contract, Exelis will engage in the second full-rate production lot of the new AN/ALQ-214 (V)4/5 system.

The AN/ALQ-214(V)4/5 combines sensitive digital receivers and active countermeasures to protect aircraft from radio frequency (RF) threats such as air defence radars and guided missiles. The new variant of the ALQ-214 system will be used on both the Department of the Navy **F/A-18 C/D Hornet** and **F/A-18 E/F Super Hornet** aircraft. The previous variant is utilised on the F/A-18 E/F Super Hornet aircraft only.

Deployed with the US Navy and Royal Australian Air Force F/A-18 E/F Super Hornet, existing legacy AN/ALQ-214 IDECM systems will continue to provide detect-and-defeat protection against RF threats well into the future. Exelis will produce the AN/ALQ-214(V)4/5 at its facility in Clifton, N.J., with system deliveries under this contract planned through 2015.

## FORTHCOMING EVENTS.....page 12



# FORTHCOMING EVENTS

For a full list of defence and industry events, head to **ADM's** online events page at [www.australiandefence.com.au](http://www.australiandefence.com.au)

## Land Environment Working Group

**DATE:** 21 June 2013, National Convention Centre, Canberra  
**ENQUIRIES:** Erin Frazier: [erin.frazier@defence.gov.au](mailto:erin.frazier@defence.gov.au), Ph: 6265 4820  
**Web:** [www.govdex.gov.au](http://www.govdex.gov.au)

This meeting is an opportunity for Industry representatives to discuss projects in the DCP with project managers. The way ahead for Land Development Branch in Capability Development Group will also be discussed. Interested participants can register and RSVP for the event through the Govdex website. Access to this website can be granted by sending an email to Erin Frazier.

## DSEI

**DATE:** 10-13 September, 2013, ExCel, London  
**ENQUIRIES:** **Web:** [www.dsei.co.uk](http://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](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.

## 2nd annual ADM Defence Support Services Summit

**DATE:** 19 Sep, 2013, Hyatt Hotel, Canberra  
**ENQUIRIES:** ADM Events - Jamie Burrage, Ph: 02 9080 4321;  
**Email:** [Jamie.burrage@informa.com.au](mailto:Jamie.burrage@informa.com.au) **Web:** [www.admevents.com.au](http://www.admevents.com.au)

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

## Pacific 2013

**DATE:** 07 - 09 Oct, 2013, Sydney Convention & Exhibition Centre, Darling Harbour  
**ENQUIRIES:** **Web:** [www.pacific2013imc.com](http://www.pacific2013imc.com)

Pacific 2013 IMC provides a unique opportunity for people involved in maritime and naval affairs around the world to discuss the latest

maritime developments in design, naval architecture, engineering, science and technology. With the concurrent Maritime Exposition, the event will provide a meeting place for industry representatives to exchange ideas and to establish personal and business contacts.

## SIA 2nd Submarine science, technology and engineering conference

**DATE:** 15 - 17 Oct, 2013, Adelaide

**ENQUIRIES:** Web: [www.submarineinstitute.com/sia-conferences/](http://www.submarineinstitute.com/sia-conferences/)

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

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

## Safeskies

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

**ENQUIRIES:** Web: [www.safeskiesaustralia.org](http://www.safeskiesaustralia.org)

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

