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COVER

The highest priority task of defending Australia is hinged on a maritime military strategy. Controlling the sea and air approaches to the nation in order to deny them to an adversary and provide maximum freedom of action for own forces is the key to defending Australia. The RAAF's role in this strategy can be examined through the lens of the core air power roles—control of the air, strike, air mobility and intelligence, surveillance & reconnaissance (ISR)—and the provisions that the Government has made to enhance its ability to carry them out effectively

Cover: Phil Crowther.

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Defence Housing Australia (DHA) plays an important role by providing homes for Defence members and their families. Just as those families evolve, DHA is also evolving.

"DHA's business continues to shift in line with the growing and changing needs of our Defence members," Mr Howman said. "We play a vital role in ensuring that Defence members and their families are provided a stable, suitable home environment that meets both their professional and person needs."

DHA's transformation has never been more evident than in the last six months. Its agreement to provide housing and related services to Defence was extended through to at least 2023 on the back of a major review of the agreement and DHA's outstanding performance.

But that's just the beginning. DHA now provides more services than ever to Defence members including service residences, off-base housing for single members and allocation of permanent living-in accommodation.

"DHA already provides a very important and integral role with the Department of Defence by providing housing and related services to Defence members and their families," Mr Howman said.

"This new service is an expansion on DHA's existing business, but it capitalises on our nation-wide capabilities and our understanding of ADF accommodation needs and expectations. By providing the LIA Booking and Allocation Service (LIA BAS) DHA will be able to provide a more complete end-to-end housing solution for all Defence members."

DHA will commence its pilot program for the new LIA BAS in South East Queensland in late 2013 – managing bookings and allocations of all on-base accommodation (permanent, course and transit/business travel) at Enogerra, Amberley, Oakey, Canungra and Cabarlah. The national roll out of the LIA BAS is expected to be completed by April 2014.

Along with new services comes the need to be more efficient in the delivery of those services. DHA is launching an innovative mobility project to allow staff to provide better customer service.

Among the benefits that members can expect will be the ability to log maintenance issues instantly during an inspection, to plan upcoming inspections in a timelier manner, and to see how maintenance is progressing through Online Services.

When a Defence member has been posted or had a change in circumstances they can easily update their details, advise of a change in rank or personal information or provide new details about the tenancy via Online Services through the www.dha.gov.au.

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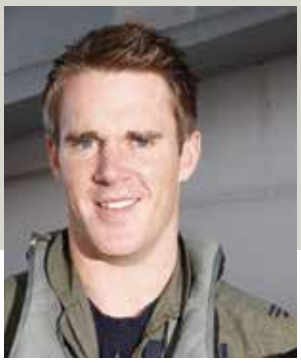


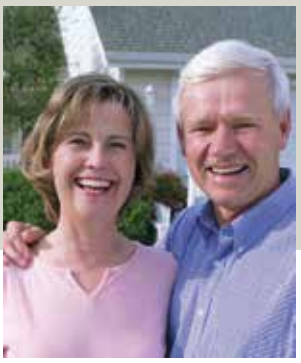

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Leaning Forward

by Trey Kazee

Camber is creating innovative technologies and leaning forward to improve customer success. In an industry driven by new missions with more investment in sophisticated weapons, sensors, and aircraft, training has become a target for cost savings. Budgets and schedule slips create pressure to download training onto more efficient and available platforms for both fixed-wing and rotary aircraft. Valuable flight hours are reserved for mission execution, reducing time away from active duty and capturing significant savings in fuel and maintenance costs. Training platforms now routinely must fill multiple and differing mission sets.

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Innovative technologies can play a significant role in maximizing training value. Insertion of on-board simulation of weapons and sensor systems, complete with synthetic forces and live participants, provide realistic training in an operational environment. Multiple configurations of varied sensors and weapons can train a variety of operational scenarios with the flexibility of simulation. Utilizing efficient platforms, the result is operational cost savings with robust training.

"Camber is continually expanding our simulation capabilities to support the expanding weapons and sensor systems as well as the other constructs in the Live-Virtual- Constructive (L-V-C) training environment," said John Lord, COO of Camber Corporation. "To achieve this vision, simulations must be capable of operating on aircraft-qualified equipment and their display and control interfaces, as well as capabilities on the ground and in classrooms."

At Camber Corporation, we are meeting this challenge head-on with simulation products that directly address these needs. We target innovation in computer technology, designing compact on-board training systems. We capitalize on Commercial-Off-The-Shelf (COTS) technologies, leveraging the best cost-effective solutions of industry.

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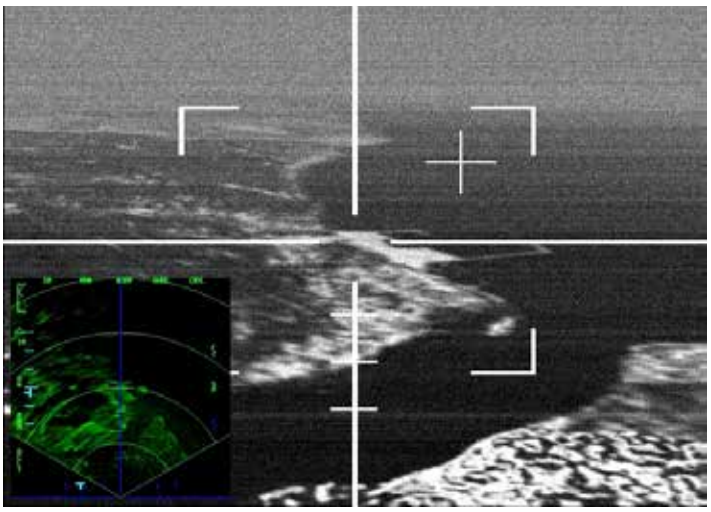
Future on-board simulated systems will play a significant role in training. We take training to the warfighter with flexibility to meet their current and future needs. Platforms like the T-1A CSO Training System can be seen as a model of how we provide superior and efficient training. Simulation technology achieves results indiscernible from reality, and synthetic environments form a basis for complex and dynamic scenarios. Immense cost savings and cutting edge training environments are achieved.



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Australian Air Force Cadets – a special part of our Air Force Family

As part of a very natural and appropriate relationship, I am very privileged and honoured as the National President of the Australian Flying Corps and Royal Australian Air Force Association to sit on the Australian Air Force Cadets National Council. I thought it was timely to set out some of the recent developments and events involving the Air Cadet Movement that would be of interest to members of the Royal Australian Air Force Association.

The Royal Australian Air Force places great store on the contribution Air Cadets make to the Australian public good. The Movement has been a fertile recruiting ground for all the Australian Armed Services for many decades and the Cadet Alumni features many distinguished Air Force personnel including a host of Chiefs of Air Force. Then there is the contribution Cadets make to Australian Society as a whole and many successful scholars, community leaders and those at the cutting edge of their profession or business have publically attributed their success to their experiences as an Air Cadet. As such the Royal Australian Air Force strongly supports the Australian Air Cadets in their endeavours especially where their activities reflect military skills and aviation.

Three such activities are the Annual National Competitions for Flying, Rifle Shooting and Field Craft. These are very popular competitions with the Cadets and they are eagerly anticipated by Cadets and their supervisors alike. The Air Force provides the venues and most of the where with all to conduct the competition but some expenses are not covered such as trophies and mementos. Sponsorship picks up the shortfall and QANTAS has been very generous for a number of years now in supporting the National Aviation Competition. I am pleased to report that the Royal Australian Air Force Association has now taken up sponsorship, with the unanimous support of the National Council, of the National Rifle Competition. In return for this support the Association receives positive publicity through the Air Force Cadet and Alumni Communities inclusive of the Cadets' families. More recently the Victorian Division of the Royal Australian Air Force Association has agreed to sponsor the National Field Craft Competition, regularly held in the Puckapunyal military training area, under similar arrangements. This is seen by the Australian Air Force Cadets National Council as a very important and generous initiative.

Another aspect of Australian Air Force Cadets life that warrants special mention is the International Air Cadet Exchange Program. The 2013 Exchange Program was held in July/August with the inbound group visiting Brisbane, Canberra and Sydney. The eight countries represented this year were Belgium, Canada, Hong Kong (China), South Korea, the Netherlands, Turkey, the United Kingdom and the united States of America. An observer from the Peoples' Republic of China also attended.

The Exchange Program is well supported by the Royal Australian Air Force and the Chief of Air Force hosted a special Dinner in the Australian Defence Force Academy Officers' Mess. I was delighted to be able to attend the function and there were three take outs I thought it worthwhile to share with you. The first was the Chief of Air Force's 'rock star' status with the Cadets and I am sure his photo with groups of cadets featured many times in the international social media – but then again it was his birthday! The second matter was quite interesting. On the trip down to Canberra the Exchange Cadets flew in a C130 aircraft and were permitted to go up to the flight deck. The Cadets simply could not stop talking about how exciting this had been and it struck me that here was a generation that had not had a similar opportunity on civilian flights in the wake of 9/11. It was the third matter, though, that really got my attention.

I was called into a number of conversations where the Cadets were recounting their most enjoyable experience during their time in Australia. The story was the same with every group I visited. They had all been quite taken with the lunch at the Pine Rivers Branch of the Royal Australian Air Force Association in Queensland and it was clearly regarded as the highlight of their trip. A great effort by the Branch and its President Bert Baker as well as Queensland Division President John Carlile who attended the lunch with Rosalee. Congratulations and well done!

In closing out my observations from the Dinner I should point out the support provided by Boeing Defence Australia and the Returned Services League of both Queensland and New South Wales for Australia's involvement in the International Air Cadet Exchange Program. Indeed, without Boeing's support it is difficult to envisage the outbound program whereby our Air Cadets are hosted overseas being able to continue.

While this has been an update on a few developments and activities of Australian Air Cadets at the National level, I am very much aware of the web of support out there at state and local level for Air and other Cadets that comes from various not for profit organisations and especially from the Royal Australian Air Force Association. It's time and money well spent.

Brent Espeland
National President
12 September 2013

Australian Air Force Cadets , Leading Cadet Jessica Swann and Flying Officer David Nance (AAFC) of 217 Squadron in the cockpit of a KC-30A Mult-Role Tanker Transport aircraft of 33SQN during their visit to RAAF Base Amberley.
Photo: RAAF

RAAF Air Power

Reorganising the RAAF

The doctrinal change that the commitment to an expeditionary approach entailed, also highlighted the need for reorganising the Air Force structure to enhance its functional approach to joint warfighting. In 2002, the Force Element Groups were reorganised to align better the Air Force's platforms with the roles being performed, rather than simply reflecting a commonality of platforms. In February 2002, Tactical Fighter Group and Strike Reconnaissance Group were amalgamated to form the Air Combat Group, and in March 2004, Maritime Patrol Group was combined with the Surveillance and Control Group to form Surveillance and Response Group. Ultimately, this reorganisation would better align the functions of the Air Force with the ADF's endorsed warfighting functions.

Rebalancing the Air Force

The reduction in uniformed personnel during the period of the Commercial Support Program (CSP) and the Members Required in Uniform (MRU) determinations was achieved at considerable cost to the Air Force. Despite this challenge, the RAAF continued to conduct and sustain a high tempo of demanding operations, from humanitarian assistance to Operation Falconer. To ensure that it maintains this capability into the future, in 2006 Air Force instituted a program to rebalance the RAAF to ensure that it distributed personnel and assets where they were most needed, whilst maintaining a critical mass of trained and motivated professionals. The rebalance of the Force was also necessary to ensure the smooth introduction into service of new capabilities, such as the AEW&C aircraft, C-17 airlifter and Multi-Role Tanker Transport. This rebalance achieved an organisational structure that meets the operational needs of a versatile Air Force.

New capabilities

The RAAF's ability to be responsive and adaptable to meet the demands of emerging national security policy, a changed strategic environment, and the technological evolution of air power has positioned it well to meet future challenges. Deployments and operations overseas have provided the Air Force with a range of insights into the conduct of complex, high-intensity coalition operations, and valuable experience in the conduct of joint operations. The lessons drawn from these deployments and operations have guided the RAAF in making informed decisions on equipment acquisition, and facilitated the induction of new capabilities that expand its operational envelope. Operations in the Middle East, East Timor and other locations within our region have highlighted the need for an organic Rapid Global Airlift (RGA) capability. The assistance mission to the Solomon Islands in 2003 provided the ADF with experience in operating within a national, whole-of-government effects-based approach to achieving strategic goals. This operation also saw the first operational ADF deployment of uninhabited aerial vehicles (UAVs). The lessons drawn from these operations formed the foundation knowledge for use when the Air Force began considering the acquisition of UAVs for the maritime surveillance and reconnaissance role. The use of space systems to support terrestrial operations is a vital means of enhancing the operational capabilities of the ADF, and its importance is reflected in the RAAF's most recent air power doctrine.

Force Protection

Force Protection (FP) seeks to minimise the vulnerability of both deployed and home-based personnel, facilities, materiel, information and operations to the threat posed by either an adversary or the environment, while preserving our freedom of action and operational effectiveness. FP affects every other warfighting function, because no operation can be raised, conducted or sustained from a vulnerable foundation.

In the Australian context, where our small forces cannot afford heavy attrition and we place a high value on life, appropriate and balanced effort must be spent in FP. Diverting Force Application capabilities towards FP is also sometimes necessary and will remain part of a commander's judgment regarding operational risk.

For Air Force, ground-based FP centres principally on protecting air bases, although FP applies equally to assets both on the ground and in the air. For air platforms, lack of effective self-protection can make the air vehicle undeployable due to vulnerability, placing a premium on ensuring that air vehicles are acquired with self-protection systems and that those systems are upgraded to keep pace with emerging threats throughout an air vehicle's service life. All Air Force assets must be able to be protected by design, either because they have some organic ability to protect themselves or they come under the protection of another system. Special attention will need to be afforded to the protection of high-value, scarce assets like Air-to-air Refuelling (AAR) and Airborne Early Warning & Control (AEW&C).

Protection against future ballistic missile threats is something that Air Force will need to consider with the other Services and our allies. Ballistic missile defence is both a national and military protection issue with wide implications for national security policy and military force development.

Future FP will need to be able to deal with threats not only in the physical domain, but also in the information and cognitive domains. The adversary will seek to undermine the veracity and effectiveness of both our information systems and the intellectual capabilities of our people. Therefore, ensuring the integrity of our network as a system will be central to our FP efforts.

Force Application

Once the force has the prerequisite situational awareness, has been deployed in an appropriate manner and has implemented necessary protective measures, it can turn its attention to Force Application (FA).

The fundamental reason for creating any warfighting organisation is to provide the nation with an ability to apply force, sometimes lethal force, in support of its national interests. Our Air Force exists to apply force in and from the air. For any potential adversary, the Air Force's FA capabilities are a significant deterrent that may prevent them from initiating hostile activity. If armed conflict occurs, our FA systems will play their part in operations by obtaining control of the air through counter air missions and by precision attacks directed against the adversary's centres of gravity. If judged prudent, early aggressive action on our part maybe used to deny the adversary freedom of movement by destroying, disrupting or degrading their systems, or to shape the battlespace to our longer-term ends. Our Air Force will always maintain the capacity to pack a punch, even in contested air space, hence the importance of stealthy penetrating air vehicles and stand-off weapons, both of which are part of the DCP.

FA covers the conduct of timely air missions to create decisive effects through kinetic and non-kinetic offensive and defensive means in support of the joint force or coalition commander. These operations depend heavily on all the warfighting functions operating in unison under the control of the C2 system to produce the conditions necessary for success. The small size of our Air Force will require that FA platforms be highly flexible, and able to switch responsively between roles both before and during a mission. Likewise, weapons that are able to be employed flexibly, and that maintain a capacity for tailored in-flight reprogramming, will allow for mission flexibiity and control over the effect created.

Counter air

An appropriate degree of control over the air environment is a prerequisite for any military operation in which the ADF participates. The adversary, particularly one employing asymmetric warfighting strategies, may choose not to, or be unable to, contest control of the air, allowing the ADF to utilise the air environment as it chooses. At other times, Air Force will be required to fight for and gain control of the air over an adversary to ensure that the joint force is able to operate unhindered in the areas and for the time required to complete a mission or campaign. The future threats to Air Force's ability to control the air dimension of the battlespace will be multifaceted and may include adversary high-end stealthy fighters *with advanced* air-to-air weapons, uninhabited combat aerial vehicles (UCAV) and sophisticated surface-to-air missile systems. Ground-based directed energy anti-air systems are possible by 2025.

Our Air Force's DCP counter air systems—which include fifth generation fighters with advanced weapons, modern AAR, AEW&C and the network itself—will have the capability to deal with the emergent air threat through a combination of onboard communications and sensors that allow transparent networking, stealth, electronic attack and self protection, systemic range, weaponry and the professional mastery of our people.

The future fight to obtain control of the air will, as now, involve the conduct of both offensive and defensive counter air operations. Offensive operations will be conducted to reduce the threat posed by adversary's force projection capabilities to manageable levels before it can be brought to bear against us, minimising our need to divert assets to Force Protection.

While our Air Force's preference will be to act pro-actively to counter by an air threats, defensive operations may also be necessary to secure freedom of action The system that will provide the required level of control of the air will consist of a number of elements working together through the network, in partnership with our sister Services and other allied and coalition partners on the day. The C2 function will plan and task air activity supported by information about the battlespace provided by the ISS function. C2 elements will use the integrated surveillance picture to manage the application of force to provide a level of control of the battlespace commensurate with the requirement to protect surface and other air operations. The integrated system should be able to detect, and create the right effect against, airborne threats well before the adversary has time to react, thereby providing a decisive advantage in any engagement.

Precision attack: Strategic attack

Strategic attack will remain a prime function for our Air Force, and can be conducted independently of surface force manoeuvre. Despite this independence of action, strategic attack is an integral part of a joint military campaign and the whole-of-government approach to national security.

Strategic attack is the precise application of air power in offensive operations to deter, disrupt, degrade or destroy carefully chosen adversary targets within the bounds of the Law of Armed Conflict (LOAC) in order to create specific effects directed against an adversary's will, warfighting capabilities or any other capacity judged to be a centre of gravity. Air Force will deliver strategic attack via dumb and smart networked weapons from stealthy penetrating or non-stealthy, non-penetrating aircraft, with choice dependent on the scenario and assessed risk.

Our DCP force will provide all of those options to planners and commanders, and we believe this breadth of options is necessary to provide strategic choices to Government. For example, various force mixes will be available from Air Force to allow Australia to present an absolute or escalatory posture to an adversary, or deliver an early and unsignalled air power-led blow to tip the balance to our ends. Having an air force able to provide options to project different fronts to an adversary is part of being a balanced force.

Strategic air attack could be conducted against targets such as an adversary's leadership, command structure, essential facilities, infrastructure, research and production facilities, and military capabilities, including ballistic missile launch sites. In the maritime domain, strategic attack can achieve decisive effect by disrupting, degrading or destroying adversary military and commercial shipping which are integral elements of national power and ability to wage war.

In both surface environments, strategic attack provides the option to destroy hostile forces before they are directed towards us, and when they are most vulnerable. Our Air Force's capacity for strategic attack gives Australia more scope to determine the timing, pace and location of actions against the adversary. Finally, strategic attack will continue

to provide a significant deterrent to, as well as impose major defensive costs on, an adversary contemplating hostile action against us.

The geographic area where these effects can be created will be expanded by the use of air-to-air refuelling and stand-off weapons that will enable platforms with shorter inherent range to achieve significant reach and generate significant strategic effects. Weapons that are precise, can loiter for long periods scanning for specific targets, or employ high-speed penetration will all add to the flexibility of strategic attack options and increase the range of effects that can be generated against an adversary at the tactical, operational and strategic levels.

Very-low observability stand-off weapons and self-protection systems capable of countering air-to-air weapons and the full range of surface-to-air systems will be critical survivability and penetration factors for air platforms operating in the strategic attack role. In highly defended areas, and against adversaries that field highly capable air forces, advanced capabilities such as stealth, complex electronic counter-measures and speed will become critical elements in projecting offensive force.

Precision attack: Integrated air

Integrated air is the integrated planning and execution of air operations as part of joint and coalition campaigns. Planning will always be highly integrated, while the degree of integration in execution will vary depending on need.

Air power is of particular value to land and maritime commanders where it is able to degrade or destroy adversary forces through counter land and counter sea operations before they are able to close with friendly forces. Land and maritime power is of great value to an air commander where it is able to fix adversary forces so that they can be attacked from the air. The networked Air Force will make use of these interdependences when developing its plans, so that air operations can be integrated with ground and maritime manoeuvre as mutually supporting activities designed to defeat the adversary in a coordinated manner. By design, the DCP-provided network will ultimately allow air, land and maritime components to realise seamless military planning and operations.

From an air power perspective, surface forces will become a key element in the suite of sensors that allows our Air Force to detect, track and engage mobile and fleeting targets. The ability to create threat-tracks in the network in real-time, with high positional accuracy, will allow Air Force platforms to act responsively to support surface forces in contact. Improving Air Force's capability for dynamic interaction, particularly with the other Services, national agencies and allies, is an imperative that will benefit all in realising seamless military and national operations.

Precision weapons of smaller yield or non-lethal effect will allow force to be applied from the air in a greater variety of circumstances and with a broader range of effects. Very Small Bombs (VSBs) weighing in the vicinity of 18-25 kilograms will be able to be aimed precisely to hit within a metre of a target point and can be employed closer to friendly forces due to their potential for reduced collateral damage. Flexibility will be enhanced by weapons that can be employed against both air and surface targets and whose payload effect can be reconfigured during a mission.

By 2025, other novel weapons such as high-power microwaves and directed energy weapons, which can produce a variety of effects without necessarily being lethal, (ie, non-kinetic) may expand the range of options available to commanders in supporting land and maritime attack missions.

Extracts from AAP 1000-F, The Future Air and Space Operating Concept

Air and Space Power in the Defence White Paper 2013

As a key part of Australia's efence strategy, The Royal Australian Air Force must be able to control Australia's air approaches and enable and support friendly operations in the land, sea and air environments.

Defence White Paper 2013, p. 87

The Defence White Paper released on 3 May 2013 provides strategic direction to the Australian Defence Force (ADF). It gives a holistic view of how the ADF's warfighting capabilities will be developed in the coming years.

In the White Paper the Government lists the four principal tasks the ADF is responsible to discharge. These tasks in order of priority are to:

- Deter and defeat armed attacks on Australia
- Contribute to stability and security in the South Pacific and Timor-Leste
- Contribute to military contingencies in the Indo-Pacific region, with priority given to Southeast Asia
- Contribute to military contingencies in support of global security.

The highest priority task of defending Australia is hinged on a maritime military strategy. Controlling the sea and air approaches to the nation in order to deny them to an adversary and provide maximum freedom of action for own forces is the key to defending Australia. This strategy, focused on the maritime domain, aims to: deter adversaries from conducting attacks against Australia or attempting coercion; achieve and maintain air and sea control in places and at times of our choosing; deny or defeat adversary attacks and protect key sea lines of communication; deny adversary forces access to forward operating bases or the freedom to conduct strikes against Australia from beyond our maritime approaches; and project power by deploying joint task forces in the Indo-Pacific region and support the operations of regional partners when required.

The RAAF's role in this strategy can be examined through

the lens of the core air power roles—control of the air, strike, air mobility and intelligence, surveillance & reconnaissance (ISR)—and the provisions that the Government has made to enhance its ability to carry them out effectively.

The current force mix of F/A-18A/B Hornet and F/A-18F Super Hornet platforms is capable of gaining and maintaining the necessary level of control of the air at specific times and locations as required to enable and support ADF joint operations. The introduction of the EA-18G Growler will add a transformational electronic warfare capability that will significantly enhance the RAAF's capability in all of the four core air power roles.

Further enhancement will be realised with the replacement of the F/A-18A/B by the F-35A Joint Strike Fighter with its stealth attributes coupled with its new weapons, sensors, networks and data-fusion capacity. The combination of this fighter fleet and the air-to-air refuelling capacity provided by the KC-30A significantly expands the geographic area where the RAAF will be able to establish adequate control of the air. Additionally, the introduction of the E-7 Wedgetail Airborne Early Warning and Control (AEW&C) aircraft has revolutionised Australia's control and coordination of its air combat fleet. The highly capable radar and systems onboard the AEW&C provide a situational awareness edge to the ADF.

A RAAF E7 aircraft of 2SQN on take-off at RAAF Base Edinburgh *Photo: RAAF*

The E-7 can also improve the level of control of the air when the Cooperative Engagement Capability (CEC) is fitted to the aircraft, which will allow the E-7 to communicate with the Navy's CEC equipped Air Warfare Destroyers (AWD). Such communications will permit the AWD to engage air targets beyond its own radar horizon and maximise the potential of its SM-6 missile, which has a range in excess of 200 nautical miles.

The F/A-18 family and F-35A are multi-role aircraft, and will not only deliver control of the air, but will also provide capable strategic and maritime strike options and pose a potent threat to a potential adversary. These provide a powerful deterrent capability. Supported by the KC-30A and the E-7, the force package will have wide ranging capabilities, superior situational awareness, and will be well coordinated. The employment of new standoff weapons—such as JASSM and JSOW—will increase the lethality and survivability of the force and complicate an adversary's defensive considerations.

Australia's continued commitment to the acquisition of the Boeing P-8A Poseidon to replace the AP-3C Orion will also enhance the RAAFs anti-submarine warfare (ASW) and anti-surface warfare (ASuW) capabilities. With its enhanced sensors and weapons, and with support from the KC-30A air-to-air refueller, the P-8A will provide long-range, long-endurance ASW and ASuW across Australia's vast maritime area of interest.

A RAAF KC-30A *Photo: RAAF*

The P-8A's maritime ISR role is being analysed with the intention of sharing the workload with an unmanned system that will undertake broad area maritime surveillance and fleet overwatch. Satellite systems and the Jindalee Operational Radar Network (JORN) will complement this combination of manned and unmanned platforms. This combined ISR capability will provide a comprehensive air and maritime surveillance system.

A USN Boeing P-8 Poseidon *Photo: Boeing*

Air Force's contribution to land and Special Forces operations is usually understood to be supplied by its air mobility fleet consisting of the C-17, C-130J and KC-30A. In the future, 10 C-27J will be acquired, the CH-47F will replace the CH-47D, and the Blackhawk will be replaced by

the MRH-90—changes that will significantly boost the ADF's tactical and heavy airlift capability. Additionally, the ISR capabilities of the E-7, P-8A and unmanned ISR platforms will contribute to improved situational awareness of these forces. The White Paper also mentions that Defence will 'investigate the expansion of the role of unmanned systems to include interdiction and close air support', a possible addition to the strike capabilities provided by the F/A-18 fleet and the F-35A.

Other ISR capabilities discussed in the White Paper include the continued development of JORN, satellite systems, and some further significant steps into space situational awareness capability. These steps include the relocation of currently US-based C-band space object detection and tracking radar and a highly advanced optical space surveillance telescope from the US to Western Australia.

The White Paper recognises that cyber capabilities 'have continued their evolution toward being military capabilities of real value'. The establishment of a new Australian Cyber Security Centre will boost Australia's ability to protect networks against cyber attacks. The Department of Defence will play a principal role in ensuring cyber security along with the best cyber security experts from a variety of other government departments along with State, Territory, industry and international partners.

From a historical perspective, the 2013 White Paper demonstrates the advances that air power has made in Australian national security thinking over the past 93 years. In 1920, the question being asked was whether a new service should be formed to field Australia's air power, or whether air power should remain purely an adjunct to the Navy and Army to augment their capabilities with specialised development within each. The 2013 White Paper clearly indicates that the Air Force is the primary repository of Australian air power, although both the Navy and the Army field organic air power elements. In less than 100 years, air power has transitioned from being a support element that enhanced traditional military forces to an indispensable element of national power, and an essential service in its own right. Since airpower is common to all three services, it is a critical component of joint force interoperability, integration, and the delivery of joint effects.

Key Points

- *The 2013 Defence White Paper provides strategic direction to the ADF*
- *The RAAF's capabilities will be enhanced by the commitment to the acquisition of improved systems*
- *Airpower is now an indispensable element of national power*

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Air Combat Group

Air Combat Aircraft for the RAAF

The Government announced on 3 May 2013 the acquisition of 12 new-build EA-18G Growler electronic attack aircraft (AEA) in lieu of modifying 12 of the existing F/A-18F Super Hornet aircraft. The RAAF will retain the current 24 F/A-18F Super Hornets (one operational squadron) in their current air combat and strike capability configuration. No 1 Squadron will operate these aircraft and No 6 Squadron will operate the EA-18G aircraft.

EA-18G Growler Airborne Electronic Attack

As the AEA roles for the EA-18G are highly specialised, crews will be trained in the USA at NAS Whidbey Island, Washington State.

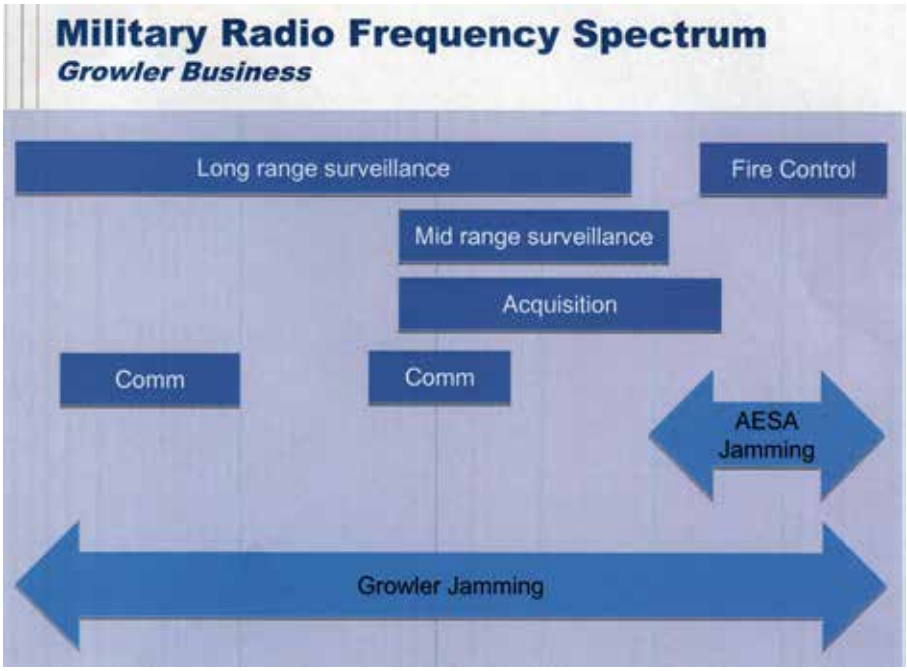
USN EA-18G Aircraft Photo: RAAF and Boeing

Key Roles

- Suppression of Enemy Air Defences: counter enemy air defences using both reactive and pre-emptive jamming techniques.
- Stand-off and Escort Jamming: highly effective in the traditional stand-off jamming mission, but with the speed and agility of a Super Hornet, it will also be effective in the escort role.
- Non-Traditional Electronic Attack: dramatically enhanced situational awareness and uninterrupted communications enables the EA-18G to achieve a high degree of integration with ground operations.
- Self-protect and Time-Critical Strike Support: With its Advanced Electronically Scanned Array (AESA) radar, digital data links and air-to-air missiles, the EA-18G has self-protection capability and effective target identification.
- Growth: high commonality with the F/A-18E/F, nine available weapon stations and modern avionics enable cost-effective synergistic growth for both aircraft, setting the stage for continuous capability enhancement.

Airborne Electronic Attack (AEA) Capabilities

- The EA-18G's ALQ-218 wideband receiver combined with the ALQ-99 Tactical Jamming System provides a capability against any radar-guided surface-to-air threat.
- Selective-reactive technology enables the EA-18G to rapidly sense and locate threats with a significantly higher degree of accuracy than was previously possible. This



Military Radio Frequency Spectrum
Graph provided by GPCAPT Phil Gordon

improved accuracy enables greater concentration of energy against threats.

- The advanced modular ALQ-227 Communication Countermeasure Set enables the EA-18G to counter a wide range of communication systems and is readily adaptable to an ever-changing threat spectrum.
- Interference Cancellation System (INCANS) enhances aircrew situational awareness by enabling uninterrupted communications during jamming operations

Replacement of Super Hornets

When the previous LNP government decided to acquire the Super Hornet, the aircraft were considered as a bridging capability only, to fill the gap until the F-35A was acquired. Delays in the F-35 identified a possible gap in the retention of an air superiority and air strike capabilities leading to the recent decision to extend the Super Hornets until around 2030. Whether the Super Hornets will be replaced with F-35A aircraft in the years ahead is not known. Many factors need to be considered in this decision and are outside the scope of this article.

Joint Strike Fighter (JSF) – F-35A

Australia is contractually committed to two JSF, which will be delivered in 2014 in the United States for testing and training purposes. RAAF crews will be trained at Luke AFB, Arizona. The Government remains committed to acquiring the JSF, with three operational squadrons and a training squadron, in the order of 72 aircraft.

Regardless of the decision to retain the current fleet of Super Hornets, if Australia is to avoid an air combat capability gap, the current fleet of F/A-18A/B aircraft will need to be replaced with JSF by 2022. Due to the lead times in acquiring new aircraft and the time to train air and ground crews to full operational capability (FOC), the new LNP Government needs to make the decision on this acquisition as soon as possible.

Lance Halvorson

Acknowledgements: GPCAPT Phil Gordon, Director Air Combat Transition Office and Boeing

Lockheed Martin F-35 Joint Strike fighters

Australian Flyers in the Invasion of Sicily

[It is 70 years since Allied air forces took their revolutionary new strategy for air warfare, proved in the victories at El Alamein and Tunis, into the battle for Sicily. Simply put, it was to win the air war first.]

Following the final victory over Axis forces in May 1942 in Tunisia, the Allies prepared to invade Sicily. During June and into July the build-up of aerial forces on Malta gathered pace. One week before the Sicily invasion D-Day, operational strength based in Malta had increased to five squadrons of night-fighters, four reconnaissance flights, and twenty Spitfire squadrons. Ground crews were also in residence preparing for the arrival of three fighter bomber wings. Having emerged from its long siege of 1940-42, Malta was now the equivalent of an unsinkable, giant-size aircraft-carrier, strategically positioned to provide air support of the Sicily invasion. (1)

Nearly two months before the planned troop landings on 9/10 July, Allied air forces opened the campaign for Sicily. Their strategy, as they had pioneered in the desert and Tunisia, was still revolutionary – to first win the air war. Allied heavy bombers flying round the clock from North Africa, bombed the 19 established and a dozen newly constructed Axis airfields in Sicily. Axis squadrons were forced to disperse to bases in the north of Sicily, and to mainland Italy, which pushed Luftwaffe fighters back beyond an effective range of the Allied landings. (2) Air interdiction operations also intensified in the Mediterranean against Axis shipping, and protecting Allied convoys against U-boats.

In the three month long air war for Sicily, there were many remarkable successes. Australian flyers were among them.

Hudson V bomber of RAF 48 Sqn 1942

Lockheed A-29 Hudson light bomber, USAAF, 1941

U-boat Alert

Shortly after mid-day on 16 June Flying Officer DT Barnard DFM of RAAF 459 Squadron, lifted his Hudson bomber into the air from the Squadron's airfield at Lydda, Palestine. Barnard was a 23 year old Australian from Launceston, Tasmania. Before the war he had been a clerk in Melbourne, Victoria.

The Australian pilot's orders were to rendezvous and collaborate with an Allied naval force, which was searching for U-boat U97. The German submarine had sunk an Allied merchant ship near the port of Haifa. Despite good visibility and only scattered cloud, Barnard was unable to locate the naval ships. He decided to gain height and begin a search patrol on his own. He might be lucky and catch sight of the navy ships, or even the U-boat .

Two hours later Barnard and his crew spotted U97. It was motoring slowly on the surface, north-westwards perhaps making for its base in Greece or Italy. Some of the U-boat crew appeared to be relaxing taking the sun on its narrow deck, and had clearly not seen the Hudson bomber. Barnard at once went into a dive, while his crew readied the bomber's depth-charges. At low level above the waves he began a run from dead astern of the U-boat.

Three depth charges were released. One fell directly onto the U-boat causing a massive 'dry-hit' explosion. Two other depth charges fell into the sea, and exploded alongside its hull.

The blast from the direct hit drove the Hudson bomber upwards for some 400 feet. Despite fighting for control of the plane, within five minutes Barnard saw the U-boat's bow rear up out of the sea, as U97 sank stern first below the waves.

Barnard turned the bomber onto a homeward direction. It had incurred serious damage to its wings, fuselage and rudder. With the same skill shown in the depth-charging of U97, he nursed it safely back to Haifa. (3)

De Havilland B Mk5 Mosquito of RAF 105 Sqn 1943

Mosquitoes in the Night

When the Sicily invasion came in the early hours of 10 July, Allied planes flew 1,092 sorties protecting the ships and landings. At the same time the incessant bombing raids on Sicilian airfields drove enemy aircraft progressively back to Italian mainland air bases.

To try and counter the Luftwaffe's capability to mount night attacks against the invasion force, a group of Mosquito night-fighters were brought in. On 4 July Squadron Leader JW Allan, DSO, DFC, landed in Malta in a detachment of six Mosquitos from RAF Squadron 256. Allan was 24 from Epping in Essex, but of Scottish birth. His radar-navigator was Flight Lieutenant HJ Davidson, DFC, a 30 year old industrial chemist from Wingham, NSW, Australia.

On the night of 15 July the Luftwaffe sent a 30 strong group of Junkers Ju 88s and other bombers in a raid against Eighth Army at Syracuse. Allan and Davidson went to work, shooting down five bombers, four Ju 88s and a three-engine Cant Z1007. During the remaining four weeks of the battle for Sicily, this remarkable team of Allan and Davidson were to claim another nine Luftwaffe bombers. Several times their own aircraft was damaged, twice returning on only one engine, demonstrating both their own and the Mosquito's resilience. (4)

The Dividends of Air Power

On 9/10 July the Luftwaffe could manage no more than 300 sorties by all aircraft. In the three days 10-12 July, the Desert Air Force alone exceeded 3,000 sorties. Allied planners had allowed for a worst case of losing 300 ships from enemy air attack. In the event only 12 ships were lost.

With freedom of the Sicilian skies, Allied aircraft bombed and strafed Axis road convoys, and hit ports and rail lines in both Sicily and southern Italy, to curtail the enemy's supplies and communications. By the middle of July the Luftwaffe was restricted to only 25 aircraft based in Sicily. In comparison at 30 July the Allies were operating 40 squadrons from 21 airfields in Sicily. (5)

On 17 August the last of the Axis forces retreated across the Straits of Messina to the toe of Italy. Allied land forces had been able to conquer Sicily with impunity from the Luftwaffe. Once again the principle of first winning the air war had borne fruit.

Notes and Sources:

1. Owen, Roderic, 'The Desert Air Force', page 187.
2. Brookes, Andrew, *'Air War over Italy'*, pages13/14.
3. Herington, John, 'Air War against Germany & Italy 1939-43', pages 568/9.
4. Herington, John, 'Air War against Germany & Italy 1939-43', pages 572/3.
5. Brookes, Andrew, *'Air War over Italy'*, pages14/17.

Author's Note:

I am researching and writing a book on the air war in the North African and Italian campaigns of the Second World War. I would welcome stories and contributions from veterans of both the RAF and RAAF from those times, and their families, with a particular interest in diaries, letters, memoirs etc. My thanks to so many who have already been in touch with me - my contact details are:

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Commemoration in Vertou, France

A ceremony was held in Vertou, France on June 28, 2013 in memory of Allied airmen who died liberating France. It was a huge emotional moment that the citizens of Vertou shared with the relatives of the airmen who perished. The plaque commemorates the crews of Lancaster JB-239 of 635 Squadron and B-26 Marauder of 322 Bomb Group USAAF.

635 Squadron was formed at RAF Downham Market in Norfolk on 20 March 1944 from two flights drawn from No. 35 Squadron and No. 97 Squadron, equipped with Lancaster Mk.I bombers, as part of No. 8 Group RAF in Bomber Command. The squadron re-equipped with Lancaster Mk III bombers the same month, then Lancaster Mk VI bombers in July 1944. After the end of its bombing operations in April 1945 it was used for transport and food relief until disbanded at Downham Market on 1 September 1945

Hervé Bonnet researched the facts surrounding the Lancaster and crew that were lost in World War II and was instrumental in producing a memorial plaque and memorial window in the Cultural Centre in Vertou. Remnants of the Lancaster and the Marauder aircraft will make up the memorial in the Centre, as a reminder of the allied airmen and their sacrifice for France. A narrative and photos of the lost crew, together with a 635 Squadron Pathfinder badge, will complete the memorial.

On D-Day, 6 June 1944 the 322d Bomb Group attacked coastal defences and gun batteries. Afterwards, during the Normandy campaign, the 322d pounded fuel and ammunition dumps, bridges, and road junctions, supporting the Allied offensive at Caen and the breakthrough at Saint-Lô in July.

The 322d flew its last mission on 24 April 1945. After V-E Day, the group was assigned to occupation duty in Germany beginning in June 1945, engaging in inventorying and disassembling German Air Force equipment and facilities. Returned to the Camp Kilmer in New Jersey in December 1945, and was inactivated on 15 December

At the crash site of Lancaster JB-239. The British and RAAF Defence Advisers with family members of the crew. Hervé Bonnet is on the far right.

All photos by Hervé Bonnet

At the crash site of Lancaster JB-239. The British and RAAF Defence Advisers with family members of the crew. Hervé Bonnet is on the far right.

The memorial Plaque

The Mayor of Vertou and French, British and Australian Defence officials at the memorial Dedication, Vertou 28 June 2013

French, British and Australian Defence officials at the memorial Dedication, Vertou, 28 June 2013

French veterans of World War II at the Memorial dedication

Headstones of the lost crewmen of JB-239, Vertou Cemetery.

Hervé Bonnet explains how the Lancaster crashed

The Sea Yields Another Secret

Seventy three years after it was shot down during the 1940-1941 London Blitz the wreckage of a Luftwaffe Dornier Do 17 light bomber was raised from the English Channel in June after being located by divers in 2008. The salvage at a cost of 600,000 pounds is regarded as well worth it as it is the sole remaining example of over 1,700 built. Despite over seven decades submerged fifty feet below the surface on the Goodwin Sands off Kent the aircraft is in remarkably complete and good condition even to a tyre still being inflated. After a long period of conservation and reconstruction estimated at five years it will become an important exhibit in the Battle of Britain display at the RAF Museum, Hendon north of London. Of the crew of four, two survived and became prisoners of war, one died and was buried in England while the body of the fourth was washed ashore in Holland.

The twin radial engine Dornier 17 had a top speed of 250 mph (400kph), carried a 2,000 pound bomb load and its wingspan of 59 feet (18m), thin shape and length of 52 feet (16 m) with a tapered rear fuselage earned it the nickname of “flying pencil”. A contemporary of the RAF Bristol Blenheim in which Australia Wing Commander Hughie Edwards won the Victoria Cross in July 1941 in an attack on Bremen, the Dornier 17 first flew operationally in the Spanish Civil War. It is thought to have been shot down by a RAF Boulton Paul Defiant night fighter, aircraft which are credited with destroying more enemy aircraft than any other night fighter during the Blitz. Unlike the Hurricane and Spitfire with their eight machine guns in the wing, it had a four gun turret behind the pilot operated by an air gunner. Despite its early success resulting from German aircraft not expecting to be attacked by a RAF fighter coming up beside them, the element of surprise did not last long and they were withdrawn from operational service.

Discovery and recovery of WWII aircraft sometimes with the remains of their crew continues long after that conflict and many have been restored to flying condition for “warbird” flying displays. Two of the more remarkable recent instances are the discovery of six USAF P38 Lockheed Lightning fighters beneath the glacial ice in Greenland and the restoration of one ,”Glacial Girl”, to flying status and the recovery of a RAF fighter from a Norwegian fjord. There are undoubtedly many Allied and Japanese downed aircraft still awaiting sometimes accidental discovery in the jungles of South East Asia and ocean battle areas around Australia. Closer to home was the discovery of No 2 Squadron Canberra A84-231 in April 2009 missing in then North Vietnam since November 1970, the recovery of the remains of the crew Flying Officer Mike Herbert and Pilot Robert Carver and their return home for RAAF funerals with full military honours in September 2009. The story of this dedicated search is told in “Magpies in Vietnam” by Group Captain Doug Hurst (Retd).

Les Sullivan
(RAAF Association)

Counter-electronics High-powered Microwave Advanced Missile Project (CHAMP)

A recent weapons flight test in the Utah desert may change future warfare after the missile successfully defeated electronic targets with little to no collateral damage.

Boeing and the US Air Force Research Laboratory (AFRL) Directed Energy Directorate, Kirtland Air Force Base, NM, successfully tested the Counter-electronics High-powered Microwave Advanced Missile Project (CHAMP) during a flight over the Utah Test and Training Range.

CHAMP, which renders electronic targets useless, is a non-kinetic alternative to traditional explosive weapons that use the energy of motion to defeat a target.

Power is cut to a room of computers after being hit by a high-powered microwave pulse from a Counter-electronics High-powered Advanced Missile Project.

During the test, the CHAMP missile navigated a pre-programmed flight plan and emitted bursts of high-powered energy, effectively knocking out the target's data and electronic subsystems. CHAMP allows for selective high-frequency radio wave strikes against numerous targets during a single mission.

"This technology marks a new era in modern-day warfare," said Keith Coleman, CHAMP program manager for Boeing Phantom Works. "In the near future, this technology may be used to render an enemy's electronic and data systems useless even before the first troops or aircraft arrive."

From: Aviation Week and Space Technology

Cloud Computing

A voluntary quality control code covering cloud computing could be in place as early as next year but risks being too soft on cloud vendors.

The cloud consumer protocol is part of a package of initiatives announced by Communications Minister Stephen Conroy at the CeBIT tech show in Sydney recently.

The National Cloud Computing Strategy will promote the uptake of cloud services in business and government through a range of measures, with the Australian Government Information Management Office handling most government cloud initiatives, such as compelling agencies to consider cloud delivered services.

However, when it comes to regulation and prescriptive measures around cloud, the government has gone light touch. "The government does not see the need for industry sector regulation for the cloud services sector," Senator Conroy said, adding that cloud services were already covered by the Privacy Act and the Competition and Consumer Act. "However, we will be encouraging industry to establish a voluntary cloud consumer protocol to outline agreed industry best practice."

That protocol will be developed by the Australian Computer Society which will work up a draft, in consultation with industry, that's likely to be completed in October.

ACS president Nick Tate said the New Zealand cloud services code would be used as a guide, although the local version will be less prescriptive. "We took the New Zealand code and talked to a number of providers. It was a mixed message coming back to us – but it was that some of the bits were too prescriptive such as having to say who you were employing and that's not really relevant to the use of the cloud," he said.

Mr Tate agreed there was a danger the Australian protocol could be too soft but said a check against that was that once drafted, the local code would be taken to the National Standing Committee on Cloud Computing.

"There is a danger (it could be too soft) which why we want the NSCCC to give us feedback," said Mr Tate. "They give me frank feedback if they are happy or unhappy."

The ACS is likely to run the registration process on the protocol. The local version will have registered providers declaring the basics specifications on their services, such as what country or countries the data would be stored in.

Another Vietnam Forward Air Controller Story

Between 1966 and 1971, a total of 36 RAAF fighter pilots served as Forward Air Controllers (FACs) with the USAF in Vietnam. The early FACs flew the Cessna O-1 "Bird Dog," a single-engine, high-wing, tandem-seat aircraft, first used by the US Army in 1950. The twin-engine Cessna O-2, "Super Skymaster" was introduced as a FAC aircraft in early 1967 to replace the O-1. In 1968, the USAF introduced the twin-engine turboprop OV-10 "Bronco" to replace both Cessnas, but the O-2 continued on until the end of the war because it was more suited to two-crew night operations. The OV-10 suffered from internal canopy reflections at night, and the crew could not operate a starlight scope through an open window like in the O-2. The RAAF pilots flew all of these aircraft.

This story is by USAF Captain Jack Schnurr, who after completing a tour flying F-4 Phantoms in Vietnam, returned as a Forward Air Controller flying the Cessna O-2 FAC aircraft. The story highlights the operational flexibility FACs had to sometimes exhibit to get the job done. Many FACs were called upon to conduct similar unfamiliar operations during their Vietnam tours.

An O-2 Cessna FAC aircraft
Photo by USAF FAC Gary Dikkers.

Down and Dirty: First FAC Combat Mission

In May of 1972 I volunteered to return to Vietnam in an O-2, nine months after completing a one year tour as an F-4 aircraft commander flying out of DaNang. The North Vietnamese had invaded South Vietnam and FACs were sorely needed. I flew two rides with an instructor, doing both close air support and interdiction missions, attempting to stem the tide of the communist forces invading the South. I received training in preparation for my check ride while flying actual combat missions. My third ride was a check ride and I was signed off as a fully qualified combat FAC.

The next morning I checked in for my assignment. I was to fly to a mountain jungle location where the day before a helicopter dropping off a Special Forces team next to a Montagnard village came under heavy fire. It had to take off immediately, leaving one team member behind on the ground outside the village in enemy territory. My mission was to see if I could make radio contact with him, check on his condition and try to affect a rescue plan.

A Cessna O-2, fitted with two rocket pods, banks away.
Photo by USAF FAC Gary Dikkers.

I was to rendezvous with two helicopter gunships and one slick Huey helicopter. Two A-1s were on strip alert to support this mission in case we picked up heavy resistance. I was immediately stunned by the responsibility I would have on my first mission. The life of the Special Forces man was in my hands; do a good job and he might live, mess it up and he would probably die a horrible death at the hands of the enemy.

We had a complicated system for selecting the proper radio frequency for authentication; of course they changed it every few hours. I did not expect someone under extreme stress to get it right a day later. I arrived in the area, rendezvoused with the helicopters as planned, made a radio call, and said a quick prayer to hear an answer. Immediately I got an answer with the correct call sign and authentication. He was alive, uninjured and not captured.

He reported that several hundred North Vietnamese soldiers had surrounded the friendly village and shooting mortars and machine guns into it. Close examination revealed that there was only one place to affect a pickup so I encoded the location and passed it on to him and requested that he move to that location. His reply was awesome: "That's what I figured out yesterday. I'm at that location now; I moved last night."

We were getting .51 caliber machine gun fire from a location overlooking the village; the pickup would have to be made from one spot on the road that ran into the village. That particular spot was not in the field of fire of the machine gun; it was blocked by trees. While on the road the helicopter would not be exposed to the gun-fire, but getting out would be a problem; the helicopter would be a sitting duck. Enemy soldiers with AK-47s were on both sides of the road next to the pickup area and were very close to the survivor.

I called for the launch of the A-1s but was told they had been assigned another mission by higher headquarters and would not be available. Great, now what! There was no one to ask what to do, no one to even get any advice from. It was my problem and I had to deal with it. My O-2 was loaded with fourteen 2.75 inch WP rockets so I decided to try to take out the .51 caliber machine gun with my rockets. I made 10 hot passes in an attempt to destroy the gunner. Every time I pointed the nose of my aircraft at him he would start shooting at me. I shot back.

I told the helicopter gunships to start working the tree lines while avoiding the area where the survivor was. While the .51 caliber was busy with me the gunships were able to work over the enemy troops with the AK-47s. The gunships ran out of ammunition and fuel and had to leave the area. The slick Huey that was to make the pick up was really hurting for fuel and wanted to leave the area. It was do or die time.

I informed the survivor of our situation and he said, “I’ll still be here tomorrow.” I didn’t think so. Desperate, I made one more rocket pass on the gun. I had four rockets left and as I rolled in on the gun I cleared the helicopter in to make the pickup. I told the survivor to pop smoke and shot three rockets so that they would impact between the gun and the helicopter to blot out the view of the gunners. I started to pull off when the tracers from the .51 caliber switched from me to the chopper. I went throttle idle, hard rudder, and executed a hammer-head stall and dove back at the gun to fire my last rocket.

This time I could get low before I fired and maybe hit him. I can still visualize the two gunners looking the other way as I fired my last rocket. It missed them by about 15 feet, impacting on the outside edge of a dirt embankment they had built around the gun. They came back on me, firing tracers that went just above my left wing. They missed me yet again. While they were shooting at me the survivor was picked up. The helicopter had arranged to have a refueling point established 20 miles down the road; they landed and refueled, took off and got the survivor to safety. My first mission as a combat FAC was down and dirty and very personal.

The responsibility that I felt as a FAC and the quick thinking required under severe stress and constantly changing conditions was more demanding than most of my 243 combat missions as a fighter pilot.

This is one of 488 real-life stories written by USAF and RAAF pilots who participated in the Vietnam war as Forward Air Controllers, and included in two books titled, “Cleared Hot,” and “Cleared Hot - Book Two,” which are available for sale at http://www.lulu.com. Just type “Cleared Hot” into the search window.

Submitted by WGCDR Peter Condon (Retired) who is the Book Coordinator.

Trash Hauler

Knuckleheads in fighter jets
Regard me with some mirth
I just carry cargo
To the corner of the earth
I’m a simple trash hauler
On a mercy flight
Cause there’s people in some foreign land
In a hopeless plight

Well I touch down after sunset
And I’m gone before the dawn
The sunrise on the windshield
Makes my soul reborn
My wife has tried to ring me
For she knows not where I’m at
Cause the places that I fly to
You won’t find on any map

I kiss the kids while sleeping
They’re tucked up warm and tight
Our goodbyes and our greetings
Are always said at night
I should have been home hours ago
To pick them up from school

But I’m stuck here on some flight line
With contaminated fuel.

I see the fancy airline crews
At places that I land
With freshly laundered uniforms
Of some exotic brand
They look at me condescendingly
Like I’m some circus freak
Cause on this trip my flying suit
Gets washed once a week

The pollies call us heroes
When the spotlights on their cause
But I’m the one who smells the death
Of catastrophes and wars
I should get out and get a job
Just work from nine to five
But I need avtur in my blood
To know that I’m alive

Nobody ever gazes up
When I plough through the sky
No one will ever change me
No matter how I try
I’ll be a trash hauler
Until the day I die
I’ll be a Trash Hauler
Until the day I die

Tomas Hamilton

Flight Simulators in the RAAF a bold step Forward or Back to the Future?

by Bob Weight

There has been a steady stream of new flight simulators and simulation capability into the RAAF over recent years, be it C-17, C-130J, Wedgetail Operational Flight Trainer, Operational Mission Simulator and Mission Support System or F/A-18 Super Hornet Visual Environment Maintenance Trainer. These are often portrayed as 'new bold steps into the future' but are they permutations on a single theme?

The RAAF has a history of the acquisition and use of flight simulators and/or procedural trainers spanning some 70 years from the World War II era 'Blue Box' Link Trainer to the current generation flight simulators with full motion, visual and audio cueing systems coupled with extremely sophisticated instructor stations. An examination of the RAAF's experiences, practical considerations and philosophic underpinnings of these acquisitions and their use highlights lessons learnt that might well inform the future.

Link Trainer

In addition to recent systems, while by no means exhaustive, the Air Force experience with flight simulation includes, Sabre, Mirage, F/A-18 Classic Hornet, Neptune and P3-B/C Orion variants, C-130A/E/H and now the J, F-111C and B-707, as well as various related simulation capabilities including air traffic control, navigator and technical/maintenance systems. Several recurring themes appear throughout the story.

The acquisition of these early flight simulators and procedural trainers, including the Classic Hornet flight simulator, that did not have the luxury of today's total weapon systems and systems engineering approach, appears to have been consistently predicated on a 'sine curve' of reasons bounded by two fundamental themes:

- **Budget and resource considerations.** The use of a simulator will result in lower airframe numbers, particularly in the training environment. So, often this argument led to a prolonged acrimonious debate concerning reduced airframe numbers to the chagrin of aircraft acquisition project proponents!
- **Capability development and experimentation considerations**. For later systems, the use of a simulator will allow the development and rehearsal of operational mission profiles that prudent airmanship and safety protocols would not allow in peacetime. Again, debate often raged about 'Rolls-Royce' solutions versus simpler (and less costly) alternatives.

The emphasis and mix between the two broad themes, which was more often than not based on the personal experiences and biases of the key project staff, seems to have reflected the chosen orthodoxy of the day.

'On budget, on time, on spec'. An inability to achieve these desirable outcomes represented another recurring lesson. That many of the earlier systems might, from the lofty heights of the digital and wireless age, appear little more than procedural trainers, with no or very limited motion and visual cueing systems, might well be true. But that same history shows that, in their day, many of the systems were 'leading edge' in the rather 'Jurassic' world of analogue bells, whistles, sphere resolvers, actuators, valves and pulleys of the earlier 'flight trainers'. That systems could be designed to allow a degree of interactive, problem and emergency fault generation, with a reasonable degree of fidelity to the real world, represented a significant achievement. Indeed, perhaps the 'on budget, on time, on spec' improvement of recent projects might, in truth, owe more to the operational flight simulator being an integral part of the design and development of the weapons system from initial design stages than to a better quality procurement system and procurer!

Aircrew prefer flying real aircraft, fitters prefer to 'fit' real components! No matter the degree of fidelity, it appears simulation is not, self-evidently, 'the real thing'! This historic and apparently enduring phenomenon has been captured within the 'immigrant vs native' analogy. The immigrant, born, bred and raised during the formative years in a foreign culture, will, no matter how well he adapts, always exhibit an accent, idiom and cultural prism, readily evident to the native. To the native, the prevailing culture is not new, it just is! Hence, as the RAAF is increasingly populated by a generation of natives to whom the digital world of gaming, interactive computers and their enhanced visual, aural and sensory cues 'just is', perhaps this phenomenon might decline. Of course, the pace of technological change might also turn the native of today into tomorrow's immigrant—if not, dinosaur!

What of the future? The reality is that flight simulators and simulation are an integral part of the RAAF and its ability to

generate air power and associated outcomes. An ability to network flight simulators was dreamed of many years ago but now represents a force multiplier in terms of national and international interoperability, operational capability development, training and experimentation. Accordingly, such capabilities are expected to remain an integral part of the RAAF well into the future.

Further and perhaps a lot more interesting is that already within the mind's eye of appropriate strategic capability development staff is the wider use of simulation and modelling and, in particular, 'simulation at the desktop'. The ability for commanders, supervisors, managers and perhaps all RAAF personnel to have a personal and collective simulation capability is seen by some as the way of the future (if not the 'here and now').

F-35 Simulator

The ability to conduct iterative 'what if' modelling, simulation, gaming and rehearsal in terms of organisational structure, resource allocation, personnel demographics, command and control relationships and task specific process permutations is seen as vital. The technology already exists and is used elsewhere and is emerging within Defence, but what of governance, coordination and communication protocols and guidelines? How well does our previous experience of platform-based simulation prepare us for the transition to decision superiority–based simulation?

And of course the ultimate challenge—are the natives, immigrants and dinosaurs ready for these bold steps forward into the new simulator-enabled RAAF? A backward glance might well inform and provide inspiration and stimulation, for the way ahead.

From the 1950s to the 1990s

One wonders if Ed Link ever realised what he was starting. From the somewhat quaint piano/pianola factory beginnings of the Link Trainer in Binghamton New York, through the only 'real' test of flight (or space) simulation training—when 'Buzz' Aldrin successfully landed the Apollo 11 Eagle lunar module on the moon—through to the modern flight simulators where commercial pilots can go direct from the simulator to flying the actual aircraft, the technologies, capabilities, usage and user acceptance of flight simulators have all undergone massive advances. One might well be excused, nonetheless, for thinking that the ever-improving pilot acceptance of such devices is perhaps not just the result of the significant strides in the technologies but a result of the present-day kids seemingly endless fixation on computer games and the associated 'simulation type' devices?

One wonders that while they were creating history if those of the time were aware of the legacy they were establishing. Certainly it would seem from Squadron Leader Bob Weight's account[1]—the Singer Link project engineer on the RAAF's C-130H Operational Flight Simulator (referred to as an OFT – Operational Flight Trainer) during the early 1980s, who was part of the later stages of Ed Link's time—they did understand the potential of what they had developed at that time. Nonetheless, it was highly unlikely that the initial users of the Link Trainers shared Ed Link's view of the future as, from all accounts, the pilots of the time simply wanted to 'punch holes in the sky' and not be bothered with such earthly devices as trainers and simulations! As Bob Weight also recollected, the very first USAF exchange officer into the Air Force Material Division as the flight simulation project manager (PMA3), Lieutenant Colonel Dick Hackford Jr (a Vietnam veteran—F4 pilot who had been shot down and spent more than 2 years as a POW) when meeting the Australian C-130H simulator contingent in Binghamton stated, 'When the Russians agree to fight the next war in simulators then I will support simulators but until then give me more aircraft, missiles and bullets!' This would seem to be the commonly held view of the time, especially amongst fighter pilots.

The Link Trainer was certainly not a flight simulator but definitely just a trainer as its name implies. However, it was probably most likely that the differentiation between the two terms was not understood or even cared about at that time. It is generally acknowledged that the start of 'flight simulation' in the RAAF was with the F-86 Sabre simulator. Before that, the Link Trainer was it! As Wing Commander Warren Tassell put it:[2]

> *It started off with my first posting after commissioning [circa 1950] when I went to Victoria Barracks and I came to work for, well he was then a Flight Lieutenant, Tom Keck and Tom had been the kingpin of the Link Trainer*

[1] Squadron Leader Weight joined the RAAF in January 1964 as an apprentice instrument fitter. Commissioned as an ENGINST in 1974, he went on to work in the RAAF's initial simulation project office within the then Air Force Materiel Division. He left the RAAF in 1984.

[2] Wing Commander Tassell joined the RAAF in 1942 as an instrument maker and served for 34 years, which included a number of postings that involved him in those very early days of using flight training devices.

world; of course, we only had Link Trainers in those days, ANT18s and then later we got D4s. And of course that was instrument simulation, so when they introduced the first simulator, which was the Avon Sabre, well that's where true simulation of an aircraft type started in the mid-50s.

At that time the Link Trainer was an integral part of the RAAF pilot selection and training. Wing Commander Geoff Schmidt said:[3]

There were two models in order, the ANT18 which was a piston version of a trainer plane and a D4 which was a jet engine version. They were used in the late 40s through to the 70s, as a test for selecting candidates for pilot training. They called it 'the Box'. It was a blue box and it had a hood over it and the pilot sat in the Box with the usual aircraft instrumentation on the panel in front of him/her. The 'pull over hood' would shut from the inside and produce instrument flying [IFR] flight conditions.

He went on to say:

But anyway they were the major pilot training machine, certainly at Wagga and Temora and places like that. All had Link Trainers and you did not get in an aeroplane until you passed your Link training course. And anyway they were very important for pilot training but they were certainly the first simulator and they did a very good job too. I mean, banking turn indicators and of course the idea of navigation, particularly flying air speed and for how long; if you had the time you should be able to fly that box pattern and that was very important for the flying instructor. The instructors took their work very seriously. The students were just too keen to line up to go flying. Anyway the Link Trainers were undoubtedly used as an aptitude testing tool for selecting candidates for pilot training as well.

As Wing Commander Schmidt also said:

In the Air Training Corps [ATC], Link Trainers were taken very seriously and maintained with great pride. But more importantly, the 'Links' were a great attraction for the cadets who could be taught basic flying skills. And quite a lot of those cadets did go on to join the Air Force as pilots and quite a lot of them went on to do commercial flight training. So the Link Trainers were a wonderful ATC asset and I think there are still some of them around today.

There was also, or so it would seem, a somewhat different recollection of the way the Link Trainer was viewed by the engineering staff and the pilots—as Air Vice-Marshal Kerry Clarke recalled:[4]

I do recall being involved in Link Trainers. Now I don't believe it was a formal program in any way to teach people how to fly, but it was an exposure opportunity where you could sit down and fly the vehicle such as it was. It was primarily designed, in my recollection, as an instrument flying tool. So you had the usual altimeter, attitude indicator, a turn and bank indicator, a very simple rudimentary broomstick-like pole in the centre, rudders and the thing rotated and tilted within I guess plus or minus—the rotation I think was continuous, but pitch was plus or minus 30 and bank was probably about the same, that sort of scale. I do recall being more interested in the way the map and tracking system worked outside … [and also] … I sort of recalled it as being a whole bunch of fun. That was my first exposure and hence my sense was that it wasn't any rigorous training program.

But without doubt the Link Trainer in its various forms did play an important part in the pilot training during the 1940s and 50s in particular. Significantly, the Link Trainers also provided the basis for the generic simulation technical and engineering capabilities and technical training at that time. While the Link Trainers were around for some time after the 50s, the emergence of the then newer aircraft types—the Sabre, Canberra, Neptune and Caribou in particular—quickly took over the thinking, application and use of the associated procedural trainers and/or flight simulators. Even though these trainers and simulators might have been extremely rudimentary at the time, they were, nonetheless, more often than not on the limit of the technologies of the time.

This leading edge technology approach seems to have been a consistent theme throughout that period and the subsequent years as the flight simulation fidelity and capabilities improved. These improvements where both:

- in step with the technology move from valves, servos and electromechanical devices through solid-state electronics to modern processors with comparatively vast amounts of memory and the associated processing speed that permitted the development of the required functionality and fidelity demanded by the emerging training regimes; and
- the increasing realisation at that time by the aircraft manufacturers of the significance of flight simulators and the need for accurate aircraft-validated flight data and the later move to using flight simulation in the engineering development and prototyping of the aircraft itself.

Nonetheless, during the 1960s and 70s there remained a general reluctance of pilots to accept simulators, as so eloquently put by Wing Commander Geoff Schmidt:

The aircraft simulators in the 50s and in the 70s were generally considered a waste of time by operational aircrew as there was no 'pucker factor'. The pucker factor, by the way, means that contraction of the sphincter as you're heading towards the ground and may be going to crash. I'm talking about now from the time of the Sabre and Mirage simulators and mainly the fighter aeroplanes, certainly well after Link Trainers. The QFIs [Qualified Flying Instructors] and also the flight commanders really had to get hold of the young pilots and twist their bloody ears to make them go and

[3] Wing Commander Schmidt joined the RAAF in 1958 as an apprentice instrument fitter. He was subsequently commissioned as an ENGINST having various roles with responsibilities for the maintenance of all RAAF flight simulators at the time.

[4] Air Vice-Marshal Clarke joined the RAAF in 1966, went through the RAAF Academy and after graduating flew Caribous, Mirages and F/A-18 Classic Hornets, and had numerous staff positions until his retirement from the RAAF in 2005. His simulation experience covered the whole gamut of the technologies of the time from Link Trainers through to the F/A-18 OFTs.

fly the simulator. And of course it was always argued that they would at least learn their drills for emergency situations; thus trainees begrudgingly saw their value as a procedural ('switchology') trainer. Now the thing is, as the young bucks would say, 'If there's no pucker factor, it's no bloody good and it doesn't fly like the real aeroplane'.

And this was reinforced by Air Vice-Marshal Kerry Clarke:

My log book reflects that I did the usual six or seven sim rides [in the Mirage simulator]. Sim wasn't very well thought of in those days. People didn't like to go into it. It was just nothing like flying the aeroplane. And of course in the early 70s there was still quite a hangover from postwar and Korea. In other words, the executives in the flying game were much more about—the Air Force was much more about—being gung-ho taking risks, being on the edge of the envelope, much more of what you might call a classic fighter school mentality. Therefore, a simulator didn't fit in any of that cycle at all.

This view seemed to be universal, as stated by Air Commodore Bob Kee:[5]

… but the pilots, once they got to learn how to fly this thing were loath to do any refreshers on it … they wanted to get and fly their own little aeroplane. They had to be forced to get back into the simulator once they'd flown the aeroplane.

The RAAF's Caribou, Neptune and Canberra aircraft had no associated flight simulators, having just basic procedural trainers. The reason for this is not known but is most likely due to the age of the airframes, the existing technologies, the lack of any realistic aircraft performance data and, maybe more importantly, the attitude of aircrew and senior officers at the time on the need for such training systems. Maybe it also had something to do with the fact they were all multi-crew aircraft—but who knows? However, in the same time frame, the RAAF started to see the emergence of actual flight simulation capabilities and, even though not generally accepted by the aircrew, the integration of such devices into the overall pilot training program. The C-130A, Sabre, the later Mirage and P-3B OFTs, and a bit later still, the F-111C simulators were all generally consistent in regard to the technologies—fixed base (i.e. no motion systems), no visuals and very limited (if any) audio cueing and instructor station capabilities. And, of course, the scope of this history project does not get us into the wider RAAF simulators and trainers that have been used extensively for many decades—things such as the Air Traffic Control Simulator and Synthetic Navigation Trainer (both at East Sale), the Mirage flight controls mock-up and many similar systems. Perhaps this could be the basis for a much wider unit history project?

While the technologies were mostly very consistent with the flight simulation technologies of the time, the changes especially in maintenance trainers are really exciting involving, as explained by Tony Di Pietro:[6]

This simulation technology, properly employed (and it can actually be right now), allows one to have a model of an engine, a pump, whatever you like built in virtual 3D. You can have a technician go into a room, plug in, and they can actually select tools, read the procedures, they can actually physically manipulate an engine or a pump, they can feel the tension, the torque and all those sort of things. The really beautiful thing about it is they can actually keep their skill up on site. The idea being to not have to take people away to say Wagga for eight or 12 months or eight or 12 weeks, but you can actually do it in the workplace. We could have the supervisor know exactly the potential of the individual in their team and they can monitor where those individuals are up to in terms of skill set. Because of this knowledge they can utilise the skill set as it's achieved. That is, immediately in the workplace and not having to wait until they've come back from a course. The individual would not need to be reassessed and go through the 'supervisor trust loop', which is basically the supervisor getting a good sense that you really did learn something and can apply it.

Compare this to the 'first' RAAF flight simulator. As Air Commodore Bob Kee stated:

The Sabre simulator, based on then available analogue computer design, was basically a procedural trainer for instrument flying and aircraft handling over an extensive range of activities and flight profiles. As there were no dual Sabres, the simulator was an important training tool used to convert pilots to the actual aircraft. One important feature of the service was that an instructor (himself a qualified Sabre pilot) operating from a specially designed control console would act as mission controller, air traffic control officer and emergency faults generator to which simulator pilots had to react. A pilot training schedule was put in place and exercises were repeated until the student got it right. When instructors judged the students were proficient in the simulator they could then fly the aircraft. Bear in mind that this was an important process because we had no dual Sabres.

In regard to the technology of the day, Air Commodore Kee observed:

The analogue technology employed was old hat. Amplifiers were thermionic valve driven, wire wound configured potentiometers representing performance graphs, for example, abounded, relays and uniselectors were used for switching and servo motors controlled signal outputs. Transistors were not used. Today a PC has more computer power than the simulator's analogue computer which filled a large room. Nonetheless, it faithfully represented the aircraft cockpit and handling characteristics. Keeping it modified to stay compatible with the aircraft was always difficult. Furthermore,

[5] Air Commodore Kee (deceased since this interview) joined the RAAF in January 1949 as an apprentice instrument fitter on No 3 Course at RAAF Wagga Wagga. In 1954 he spent some time in the UK doing a flight simulation course in preparation for the Sabre simulator. Commissioned in 1953, he went on to serve in many and varied positions with overall flight simulation engineering and technical responsibilities.

[6] Tony Di Pietro served 30 years with the Navy, with significant time as an experimental test pilot; as such having a variety of flight simulation experiences. After leaving the RAN, he eventually became involved in the 2030 Air Force study with extensive application of computer modelling and simulation in regard to organisational and personnel development.

once pilots got to fly the aircraft they were reluctant to do simulator refresher training, which to my mind was important in terms of emergency procedures.

But even so they were consistent with the technologies of the day and, even with some pilot reluctance, the simulators did provide positive training to the pilots.

Former test pilot, Group Captain Ron Green, used some 'innovative' techniques to provide such positive training:[7]

When Operation Sabre Ferry was finally given approval to take place, I was the Nav Officer of 78 Wing at Williamtown and, as such, a lot of the planning fell on my shoulders. One of the aspects of concern was some level of apprehension about the intertropical convergence zone [ITCZ], which we were going to have to fly through. People kept emphasising to me the turbulence, the thunderstorms, the noise, the lightning, the hail, you name it. We only had one Sabre simulator at that time and that was the fixed simulator at Williamtown (the mobile one was not in commission) and I got the job of putting all the pilots that were going to fly on Sabre Ferry through the simulator … we finished up modifying the fluorescent lights in the simulator building, getting a very smooth running electric drill and fitting the drill with a shaft with rubber paddles installed. We could mimic turbulence through the flight controls to a reasonable extent. So every one of those pilots had to go in there, with me sitting up behind with the simulator room lights dimmed, and then the opaque canopy was closed so he couldn't really see what was going on and we then turned the lights down, just gradually dimmed them until they finished and, after probably 10 minutes or so, after reaching cruise altitude, started feeding a bit of turbulence into the system prior to the first of the thunderstorms. Turned the fluorescents on and off and getting them to flicker, flash before entering the simulator hailstorm. This involved using the electric drill spinning up the paddles and allowing them to hit the front bulkhead. We weren't really very advanced. However, there were very few people in 78 Wing that came out of that exercise without perspiration pouring off them. So I guess we were fairly pleased with that, it was good value.

And from Group Captain Bryan Harris in regard to the 'trash haulers' experience:[8]

We were probably a bit scared of them [simulators] because it was always seen as an assessment process, but right from the start it was interesting the way the simulator was used in 37 Squadron. Although none of us had ever heard of CRM [Cockpit Resource Management] at that time and I don't think it had formally been named yet, that was always a part of the way the simulator was used to take away the dictatorial 'Captain speaking' sort of role and spread involvement right across the cockpit so that, if you were posed a problem, it was part of the process that you would automatically involve the other crew members in reaching a sensible resolution.

C130 H Simulator

Bryan went on to say:

Well in the mid to late 60s we'd always done it in the aircraft, but it was what later became known as CRM and, although we didn't know it, we were really at the forefront of pushing that as a way to do things to the extent that one of the executives of the squadron reverted to type in his first simulator trip. It was quite interesting, as an example of people riding the thing for the first time. He was given an engine fire and decided the copilot and the engineer were being a bit slow with the checklist so he pulled the condition lever to feather and pulled the fire handle, except he managed to shut down two engines by doing it all himself; so the point was well and truly reinforced and that really brought it home. But it was interesting; one of our instructors having never actually pulled a fire handle in anger was posed in the right-hand seat with a situation where they had an engine fire, he had to shut the engine down and he grabbed the fire handle and pulled it right out of the

[7] Group Captain Green joined the RAAF in 1950, graduating in 1954 going into the fighter stream flying Mustangs and Sabres until completing the Empire Test Pilots' School (ETPS) course in the UK. Thereafter doing a lot of test work with Mirages and F-111s, and gaining significant flight simulation experience throughout that time.

[8] Group Captain Harris joined the RAAF in February 1957 as a radio apprentice and soon after completing his training transferred to pilot training. He left the RAAF in 1996 after many years flying a variety of RAAF and USAF aircraft, mostly in the transport world. Through that he had extensive experience, in particular, with the various C-130 simulators.

panel. From that point, I suppose it was worthwhile, knowing how the actual bits of the aeroplane reacted when you used them.

But interestingly, perhaps Bryan and his peers might still have had something to learn about the capability:

I was in the simulator one day, in the left-hand seat and they gave us a simulated smoke and fumes elimination, and I didn't know they could do that. This was around the time those astronauts met a nasty end at Cape Canaveral in a simulator fire, and the engineer commented, 'Lot of smoke in here today'. I looked around over my right shoulder and I could see the thing was full of smoke, so I unstrapped and departed. I was politely told to get back in the seat and handle the emergency.

The C-130E simulator was the first simulator to introduce a motion system into the RAAF. Although the RAN introduced the first visual system into the ADF for their Sea King helicopter simulator at NAS Nowra (late 1970s/early 1980s), the C-130H and AP-3C Operational Flight Simulators (OFTs), as they had then become known, were the first to introduce a visual system into the RAAF. The C-130E simulator incorporated a basic three degrees of freedom (3 DOF) motion system (roll, pitch and yaw) with no horizontal, lateral or vertical forces that were not introduced until the development of the 6 DOF systems that came along in the RAAF during the 80s.

Nonetheless, the E-model simulator still lacked the fidelity needed to provide the level of training necessary for the aircrew. Bryan Harris again:

Yes, it [the C-130E simulator] was always more of an instruction than a test that we were using it for. I don't know whether we were using it more in those days to help kids that were having trouble in the aeroplane or whether, because I was CO, I and was more aware of it (which is probably more to the point), but there were episodes where if a kid was having problems with a particular area we'd just take him down to the simulator and do it over and over again, particularly instrument work and things like that because that old E model wasn't a bad instruments procedural trainer. It didn't quite fly like the aeroplane, but very few of those old simulators did.

Part 2 of the Flight Simulator article will be published in a later issue of Wings

C-130 E aircraft near Sydney ***Photo: RAAF***

RAAF Association Memorials Dedication – SA Division

The Bomber Command & RAAF Memorials Dedication & Service was conducted at the new memorial (pictured) on Sunday 2 June 2013

Following the Adelaide Airport Authority's requirement to resume the area where the RAAF Squadrons' plaques had been located for many years, SA Division decided to relocate them to the Torrens Parade Ground where they would be more visible and easier to access. Accordingly, the plaques have been attached to three granite pieces with a flagpole in the centre. In addition, the annual Bomber Command Commemoration Service was re-located to the new memorial.

The occasion was attended by many veterans, relatives, current serving members and members of the AAFC. The service was conducted by Chaplain Mark Butler. The President of RAAFA, Dave Helman addressed the gathering and perpetually entrusted the Air Force Memorial to the care of the Australian Air Force Cadets.

Members of the AAFC No. 6 Wing did a splendid job with the ceremonial unveiling of the memorial. The memorial was funded jointly by DVA, Adelaide Airport and the RAAFA. Tilletts Memorials did a wonderful job constructing the memorial; Adam Williams was the architect.

State President RAAF Assoc (SA Divn), Dave Helman, addressing the members at the dedication

AAFC formed the catafalque party

70th Anniversary of the Nuremberg Raid

2014 will see the 70th Anniversary of the Nuremberg Raid. On 30 - 31 March 1944, Bomber Command lost 95 of a total force of 795 aircraft on this, their most calamitous operation of the war.

To ensure this significant operation is not passed without suitable recognition, Timeline Productions, of New York, USA, are currently well advanced in the pre-production stages of a 90-minute documentary which will at last dispel the many myths surrounding this night, and for the first time, reveal the truth. I have been working with them since November 2012 on the project as historical advisor and have also been asked to guide and narrate the documentary on screen, including conducting interviews with the specialist historians who have agreed to take part.

The mosaic of this story is almost complete, but I feel that it would lack a vital contribution if we do not locate a veteran of this operation who would be willing to come forward and be interviewed on screen. If anyone in the Association, or knows of anyone who is, is a veteran of Nuremberg and would be willing to come forward and speak to me, initially in strictest confidence, but with a view to perhaps appearing on screen then do contact me via a Facebook private message.

If you are a relative of a Nuremberg Veteran, or possess any material you may feel appropriate and would like to contribute in some way to this project, then do please contact me. This is a serious appeal for a very worthwhile project. There is much interest in and many pages about Bomber Command on Facebook, so I know the level of interest in our common subject. Please do assist us if you can, for it is, quite simply, another way that we will ensure Bomber Command, and especially this night of its greatest sacrifice, will never be forgotten.

From Timeline Productions' Industry Proposal document: 'The documentary focuses not only on solving the mystery of what went wrong on the night of March 30/31, but on the technological advances of the combatants, the espionage component, and the young airmen who risked their lives for freedom. By profiling these stories in a fresh perspective using a mix of on-camera interviews, archival footage, 3D animation and re-enactments, this project will finally deliver closure to one of the great mysteries of World War II. '

Of course, many Australians took part in this operation. In fact, it was a chapter from an unpublished manuscript, 'Nuremberg - The Big Sell-Out', by FSGT 'Dig' Condon, RAAF, a 101 Squadron Wireless Op, posted on my website, which led to the film company initially contacting me, and, basically inspired this documentary.

Many thanks

Mark Chandler, OR contact

Jo & Richard

<twoat252@gmail.com>

Royal Australian Navy Sydney Harbour Spectacular

The Royal Australian Navy (RAN) and Imagination (Australia) Pty Ltd have released the first details of the pyrotechnics and light show that will be a highlight of International Fleet Review 3-5 October 2013, commemorating the arrival of the first RAN Fleet in 1913.

The Spectacular will be a highly complex and choreographed fireworks, projection, lighting and live action show, centred on Sydney Harbour and the Sydney Opera House. The Spectacular will see the harbour come alive as never before, in a 30-minute show celebrating over 100 years of the RAN, and in particular commemorating the RANs original seven warships that arrived in Sydney Harbour in 1913.

Fireworks will be launched from city rooftops, barge positions from the vicinity of Cockatoo Island to east of Fort Denison, the Harbour Bridge road deck, and for the first time ever, from the decks of RAN warships. This will all be joined by a light show from land, warships and Harbour Bridge positions, as well as a full projection show, telling the history of the Navy. The projection show will be seen on both sides of the Opera House sails, the eastern side of the Harbour Bridge pylons and the roof of the Australian National Maritime Museum in Darling Harbour.

Flyovers by Navy and Air Force aircraft will also feature. The entire show will be choreographed to a soundtrack created in collaboration with the Royal Australian Navy Director of Music, Lieutenant Commander Paul Cottier. The Spectacular will be visible across the harbour, and everyone is encouraged to come down and watch this once-in-a-lifetime event. It will also be telecast live on ABC1.

The International Fleet Review will get underway with a tall ships entry to Sydney Harbour on Thursday 3 October, followed by a combined warships fleet entry on Friday 4 October, when the Governor-General will welcome the fleet from Bradleys Head. At the end of the fleet entry, there will be a total of 58 warships and tall ships anchored or berthed in and around Sydney Harbour.

Saturday 5 October will see the assembled Fleet ceremonially reviewed by Her Excellency, the Governor-General, followed by military aircraft displays. The ceremonies will culminate in the early evening with the half-hour fireworks and light show Spectacular.

More than 40 warships and 17 tall ships, plus 8000 naval personnel from 19 nations, will participate in the International Fleet Review, which is being staged in partnership with the NSW Government and City of Sydney Council.

Media Note:

- Computer-generated renderings of the pyrotechnics and light show are available at: http://images.defence.gov.au/S20130976
- A teaser trailer is available online at: http://defence.viotv.com/?mediaId=8fceebdf-8189-4ef3-84ed-2845a45133d8. A copy can be provided to networks upon request. For more information on the IFR go to: www.navy.gov.au/ifr

Veteran & Community Grants 2012-13 Funding Round Five

NEW SOUTH WALES

Recipient Location Funding description
Amount $

Laurieton Subbranch of the Returned & Services League of Australia NSW Branch Laurieton
To undertake a series of bus trips to reduce social isolation.
$13,810

Returned Services League of Australia Taree Subbranch Taree
To assist with the purchase of a new community bus to assist in reducing social isolation within the local area.
$38,900

Total Grants - NSW - 2
Total $52,710

QUEENSLAND

Recipient Location Funding description
Amount $

Laidley Community Day Club Laidley
To purchase a projector and screen, computer equipment, software and internet access to conduct computer training courses for the veteran community.
$3,519

Laidley Community Day Club Laidley
To undertake a series of bus trips to reduce social isolation.
$5,156

Mitchie Day Club Mitchelton
To undertake a series of bus trips to reduce social isolation.
$3,000

Redcliffe TPI Centre Redcliffe
To undertake a series of bus trips to reduce social isolation.
$7,477

Returned & Services League of Australia (QLD Branch) Bundaberg Subbranch Incorporated Bundaberg
To purchase a projector and screen to enhance programs provided to the veteran community.
$4,367

Returned & Services League of Australia (QLD Branch) Bundaberg Subbranch Incorporated Bundaberg
To undertake a series of bus trips to reduce social isolation.
$5,565

Returned & Services League of Australia (QLD Branch) Townsville Subbranch Incorporated Hermit Park
To undertake a safety upgrade of the fishing vessel operated by the RSL Fishing Club for the benefit of members.
$13,381

Returned & Services League of Australia (Queensland Branch) Oakey Subbranch Incorporated Oakey
To refurbish and furnish an upstairs area of the RSL Sub-branch premises for use as a library and drop-in centre.
$29,282

Total Grants - QLD - 8
Total $71,747

TASMANIA

Recipient Location Funding description
Amount $

Clarence Legacy Widows ClubRosny
To undertake a series of bus trips to reduce social isolation.
$3,000

Totally and Permanently Incapacitated Association (Tasmania Branch) New Town
To purchase a photocopier for the production of a quarterly magazine.
$13,412

Total Grants - TAS - 2
Total $16,412

VICTORIA

Recipient Location Funding description
Amount $

1066 Hastings Day Club Hastings
To purchase new audiovisual equipment to enhance the programs currently provided by the Day Club.
$781

Benalla RSL Subbranch Benalla
To undertake a series of bus trips to reduce social isolation.
$1,930

Cheltenham Moorabbin RSL Subbranch Incorporated Cheltenham
To purchase new audiovisual equipment to enhance the programs currently provided by the Day Club.
$1,743

Cheltenham Moorabbin RSL Subbranch Incorporated Cheltenham
To undertake a series of bus trips to reduce social isolation.
$3,200

Norlane Returned and Services League Subbranch Norlane
To refurbish the roof of the club room premises to enhance activities provided to the veteran community.
$7,000

Red Cliffs - Irymple RSL Subbranch Incorporated Red Cliffs
To install air-conditioning in the Subbranch for the wellbeing of the local veteran community.
$4,350

Sandringham Bowls Club Incorporated Black Rock
To purchase a projector and screen to enhance activities provided for the veteran community.
$2,740

Woodend RSL Subbranch (Incorporated) Woodend
To refurbish the clubrooms floor, replace carpets and purchase tables and chairs to enhance activities provided to the veteran community.
$18,782

Total Grants - VIC - 8
Total $40,526

WESTERN AUSTRALIA

Recipient Location Funding description
Amount $

Pinjarra RSL Subbranch Pinjarra
To purchase a photocopier to enhance the production of newsletters and flyers for the benefit of the veteran community.
$5,918

Total Grants - WA - 1
Total $5,918

Other States and Territories : NIL

National Total: 21 **National Total $187,313**

Gallipoli 2015 Ballot

The Minister Assisting the Prime Minister on the Centenary of Anzac Warren Snowdon provided in May 2013 further details on the ballot arrangements for Australians planning to attend Anzac Day commemorations in Gallipoli on 25 April 2015.

"A ballot is the fairest and most transparent approach to the allocation of attendance passes for the centenary commemorations at Gallipoli, within previously agreed and announced capacity of 10,500 places at the Anzac Commemorative Site," Mr Snowdon said. "My New Zealand counterpart, the Hon Michael Woodhouse, Minister for Veterans' Affairs, has made a similar announcement today."

Following the agreement of the Turkish Government, the Government had previously announced that the places will be shared between Australian and NZ (8,000 Australians, 2,000 New Zealanders) and up to 500 places have been set aside for official representatives and guests, including representatives of all countries that served in the Gallipoli campaign.

Mr Snowdon said the Government had carefully considered options for the ballot, drawing on feedback received from members of the public, the veteran and Defence communities and tour operators as part of a public consultation undertaken in 2012.

Some of the places available to Australians will be reserved for special representatives including:

- Widows of Australian First World War veterans – they do not need to participate in the ballot and will be included as part of Australia's official representatives, with a companion, if fit to travel.
- Five per cent of places allocated in the ballot will be reserved for Australian direct descendants of veterans of the Gallipoli campaign – with preference being given to the sons and daughters of Gallipoli veterans.
- Five per cent of places in the ballot will be reserved for veterans who have qualifying service or who have deployed on any operations outside Australia, whether they are warlike, non-warlike or peacetime operations.
- Five per cent of places will be set aside outside the ballot process for representative secondary school children and their chaperones, to be allocated and managed through the states and territories.

The remaining places (3,000 double passes) will be available for all Australians. The following criteria will apply to the ballot:

- Applicants must be an Australian citizen or permanent resident of Australia to register, but do not need to be living in Australia at the time of registration.
- Applicants must be a minimum of 18 years of age on, or before, 25 April 2015 to register.
- Applicants can only register once.
- All passes will be issued as double passes – the accompanying pass holder does not need to be an Australian citizen or permanent resident of Australia.
- No additional passes will be provided to an individual that is successful in the ballot.
- Pass holders must make all arrangements for their travel and cover all costs including flights, accommodation, transport and travel insurance etc.

"The ballot is expected to be open for registrations on 1 November 2013 and close on 31 January 2014. Details on how to register will be available later in the year following the engagement of a provider to conduct the ballot," Mr Snowdon said.

"Advice will be provided to individuals on the ballot outcome in March 2014, to ensure those successful have enough time to organise and pay for their trip. This will also allow tour operators to make specific arrangements with those travellers who have secured passed for the Anzac Day commemorations at Gallipoli."

The Turkish Government has entrusted the Australian and New Zealand Governments to manage the events on 25 April 2015 which include the Dawn Service and subsequent services at Lone Pine and Chunuk Bair. Both governments wish to express their gratitude to the Turkish Government for the level of support that it has provided, and its commitment to the events associated with the Centenary of Anzac.

"The Gallipoli campaign lasted eight months from April to December 1915, and I encourage those who are thinking about applying for the ballot, and may not be eligible for a special representative place, to consider whether they want to visit Gallipoli at another time in 2015," he said.

For more information on ballot arrangements visit www.gallipoli2015.dva.gov.au

A host of activities and initiatives at a domestic and international level will occur from 2014 to 2018 to commemorate the Centenary of Australia's involvement in the First World War. For more information visit www.anzaccentenary.gov.au

Step	Activity	Date
1	Announcement of ballot details	13 May 2013
2	Procurement process of ballot and ticketing provider	May – July 2013
3	Ballot system development, testing and audit	1 August – 30 October 2013
4	Registration for ballot opens (Registration available online, via telephone and other method)	1 November 2013
5	Registration for ballot closes	31 January 2014
6	Finalisation of administrative details and running of ballot	1 - 28 February 2014
7	Advice sent to applicants	1 - 30 March 2014
8	Passport details to be registered and confirmation that all pass holders will attend the commemorations	1 May – 30 November 2014

Ballot System Cascade

All passes will be allocated as double passes. No additional passes will be provided to any individual that is successful in the ballot. The ballot will operate in four cascades (noting that 400 youth passes will be distributed outside of the ballot process): **Cascade**	**Inclusion in ballot**	**Outcome**	**Unsuccessful applicants**
1st	Applicants who have indicated "Direct Descendent" with preference to first generation – sons and daughters	400 double passes allocated (total 800 pax)	Those who have also indicated "Veteran" go to 2nd cascade. Those who haven't go to 3rd cascade
2nd	Applicants who have indicated "Veteran"	400 double passes allocated (total 800 pax)	Go to 3rd cascade
3rd	Applicants who haven't indicated either "Direct Descendent" or "Veteran" (i.e. the Australian public), plus unsuccessful applicants from 1st & 2nd cascades	3,000 double passes (total 6,000 pax)	Those who have indicated willingness to be placed on a wait list go to 4th cascade. Those who haven't are out of the ballot
4th	Applicants who have indicated willingness to be placed on a wait list	Establish a priority order for allocating passes as they become available	

Veterans and Veterans Families Counselling Service (VVCS) and Veterans Line can be reached 24 hours a day across Australia for crisis support and free and confidential counselling. Phone 1800 011 046.

Gallipoli 2015 ballot opening soon

Australians planning to attend Anzac Day commemorations at Gallipoli in 2015 can apply for the ballot from 1 November. But there's no need to rush – the ballot is open for 3 months, closing on 31 January 2014.

The Anzac Commemorative Site at Gallipoli can safely, securely and comfortably accommodate 10,500 people. In 2015, this will comprise places for 8,000 Australians, 2,000 New Zealanders and up to 500 official representatives of the countries that served in the Gallipoli campaign.

Some of the places available to Australians will be reserved for special representatives including: direct descendants of Gallipoli veterans, widows of Australian First World War veterans, veterans of other conflicts, Australian secondary school students and their chaperones.

Widows of First World War veterans do not need to apply for the ballot and will be contacted separately by DVA regarding their interest in attending. Places for secondary school students and their chaperones will be allocated outside the ballot by State and Territory Governments.The remaining places (3,000 double passes) will be open for all Australians to apply.

Advice will be provided to individuals on the ballot outcome in March 2014, to ensure those successful have enough time to organise and pay for their trip.

Those who have already booked a tour to Gallipoli in 2015, which includes attending official Anzac Day commemorative services, should speak to their travel agent or tour operator regarding arrangements if they are not successful in the ballot. Tour operators are not in a position where they can guarantee a place at the commemorations.

For information on ballot eligibility or to apply from 1 November 2013, visit the Gallipoli 2015 website www.gallipoli2015.dva.gov.au

Fallen Peacekeepers Honoured

Minister for Veterans Affairs Warren Snowdon has congratulated the Australian War Memorial for recognising the service and sacrifice of Australia's Peacekeepers on the Honour Roll. "I applauded the War Memorial Councils decision earlier this year, and I am proud that the new panels have been unveiled today," Mr Snowdon said

The Australian War Memorial Council decided earlier this year to include the names of Australian Peacekeepers who have died in the line of duty on the Honour Roll. The unveiling

of the new Peacekeepers panel on the Honour Roll, ensures that those 48 Australians who have died preserving peace and defending civilian lives in countries ravaged by conflict are properly recognised.

The recognition accorded to these fallen members is a significant step for the Australian War Memorial and it will be welcomed by the families of those 48 Peacekeepers whose names are now inscribed beside those Australians who have died at war.

30 AUG 13

Australia Commemorates One of its Gravest Times

On Battle for Australia Day, 4 September 2013, Minister for Veterans Affairs Warren Snowdon has asked Australians to remember the time when our shores were under threat during the Second World War.

Mr Snowdon spent time on Battle for Australia Day visiting Taminmin College in the Northern Territory and presented the school with a copy of *Australian War Memorial - Treasures from a Century of Collecting*. During 1942 and 1943 Australia faced a direct attack from Japanese forces, withstanding multiple bombings to Darwin and other northern towns including Port Hedland, Broome, Derby, Katherine and Townsville, Mr Snowdon said.

Battle for Australia Day was declared a day of national observance in 2008 and is marked on the first Wednesday of September. Battle for Australia Day recognises a grave time in Australias wartime history and the contribution of the servicemen and women who defended Australias home front both across the northern Australian coastline and throughout the south-west Pacific including Milne Bay and the Kokoda track, he said.

This year is especially significant as it marks 70 years since the Battle of Wau, a little known but important battle against Japanese forces in Papua New Guinea. The settlement of Wau was highly valued for its airstrip, a crucial supply line for the Australian Kanga Force who defended the surrounding area.

Facing Japanese troops advancing from Salamaua in early 1943, Australian forces attempted to deliver reinforcements to Wau by air but were prevented by bad weather. The situation came to a head on 28 January 1943. Far outnumbered, a single Australian company of less than 200 men held their position against the Japanese force in a hard fought and relentless battle. Reinforcements arrived the next day and the Japanese were driven back from the airstrip.

This outstanding Australian victory in the Battle of Wau helped pave the way for future advances in the region and illustrates the bravery and service that we honour today. On 4 September, Australia gives its deepest thanks and gratitude to all those who have served in defence of our nation, Mr Snowdon said.

For more information on Australian involvement in the Second World War visit www.ww2australia.gov.au.

Remembering Vietnam Veterans – 18 August 2013

Vietnam Veterans' Day is commemorated each year on the anniversary of the Battle of Long Tan, 18 August 1966, one of the most significant Australian actions of the Vietnam War. Some 60,000 Australians including ground troops, air force and navy personnel served in Vietnam for over a decade from 1962. As a result of this war, 521 Australians died paying the ultimate sacrifice for their country. Ceremonies held around Australia honoured the service and sacrifice of these brave men and women who served in Vietnam.

The Vietnam War caused the greatest social and political unrest in Australia since the First World War and for many veterans, the treatment they received on their return to Australia left enduring scars. For the 47,000 surviving veterans, time has not always healed the physical and psychological scars, which have often been shared by loving family members. Today, we recognise and honour these fine Australians and their families.

Wreaths and 'Magpies in Vietnam' book at Vietnam Veterans National Memorial, Canberra, 18 August 2013.
Photo: Lance Halvorson

We Remember - 60 Years Since the Korean War Armistice

Fifteen veterans of the Korean War went back to the Republic of Korea at the end of July 2013 to mark the 60th anniversary of the signing of the armistice, which marked the end of active fighting on the Korean peninsula.

"Often labeled the forgotten war, these veterans, along with the approximate 18,000 Australians who served, will never forget the trying conditions and harsh fighting that occurred some 60 years ago. They were involved in many battles, including the famous Battle of Kapyong, one of the finest hours in Australia's military history. The Third Battalion of the Royal Australian Regiment (3RAR) received a United States Presidential Unit Citation for their valor during the battle," Mr Snowdon said.

Veterans from states and territories across Australia departed for the Republic of Korea in what was a moving journey back to the place they served in the early 1950's. For some it was

the first time they have returned to Korea since the War.

The veterans represent the Royal Australian Navy, Royal Australian Air Force and the Australian Army, along with a member from the Royal Australian Army Nursing Corps.

"What these men and women achieved in a country where the elements could be just as fierce as the enemy is a credit to their determination and strength. These fifteen individuals fought, and provided nursing support as part of the United Nations force defending South Korea from a communist invasion. The actions of the Australian forces in Korea played a crucial role in cementing our Post-War alliances", Mr Snowdon said.

Officially, the Korean War lasted just over three years. The armistice was signed on 27 July 1953 following a two years negotiations period .

The veteran delegation participated in several ceremonies, including the Armistice Ceremony on 27 July at the Korean War Memorial in Seoul, were they were joined by veterans from South Korea, and former allies from countries including the United States, the United Kingdom, Canada and New Zealand.

"The return was one of high emotion for these men and women as they reconnected with their mates and former allies, while also remembering those who are tragically no longer with us today, many of whom never left Korean soil, " Mr Snowdon said.

A National Commemorative Service was also held in Australia at the Australian National Korean War Memorial on Anzac Parade in Canberra. The service was held on Saturday, 27 July 2013.

Suicide Awareness Support for Veterans Now Online

The Minister for Veterans Affairs, Warren Snowdon, announced on 23 August 2013 that a new website, Operation *Life* Online, has been launched to assist veterans, Australian Defence Force (ADF) members and their families in learning about suicide prevention.

The website is the latest addition to Operation *Life,* the Department of Veterans Affairs (DVA) suicide prevention and mental health resource. Operation *Life* Online provides advice and resources for the veteran and defence communities, and is designed to raise awareness of suicide, from recognising warning signs and risk factors to learning ways to help in times of crisis.

Mr Snowdon said that Operation *Life* Online will offer advice to people in need of immediate assistance, regardless of the time of day or their location. It is a tool to build resilience and to provide a direct channel to help when needed, he said.

Operation *Life* workshops are also available for people who are concerned about family, friends, mates or others in the veteran community. Attendance is free and people can register through the Veterans and Veterans Families Counselling Service (VVCS). Tragically, suicide is the leading cause of death in Australia for men under 44 years and women under 34, and current and former serving members of the ADF are not immune from this loss. However, support is available and awareness of suicide risk, could help save a life.

Mr Snowdon reminded the veteran community that free mental health treatment is available for eligible veterans without the need to lodge a DVA compensation claim, they just need to contact DVA on 133 254. Access to Operation *Life* Online is via DVAs At Ease mental health portal www.at-ease.dva.gov.au

Veterans and their families can access 24-hour counselling and support through the VVCS on 1800 011 046. In the event of an emergency, call 000.

Advocacy, Entitlements and Support (AES) Spot[1]

Introduction

This quarter, I'd like to take a very different tack and outline some of the issues that are currently occupying the National (and some Division) Councils. I'll outline some of them in this article, with the intention of giving you some facts and ideas with which to encourage others to join RAAFA.

I admit, that the relationship may seem a little tenuous between some of the issues and the provision of advocacy, entitlements and support (AES). But, viewed from another perspective, sustaining membership is central to the Association's future. AES is an essential service.

Therefore, anything that facilitates service provision is central to the Association's future. This article identifies a range of issues that, within a wide interpretation, will facilitate the provision of services to members.

Finally, I should add the caveat that, while the initiatives in this article have National Council endorsement, the observations and analysis are my own. I take full responsibility for any errors and the views expressed.

Situation

Like most other "traditional" ex-service organisations, as WWII and Korean veterans and ex-RAAF personnel of those eras pass away, the Air Force Association is suffering a declining membership.

In parallel, veterans of contemporary conflicts and recently separated ex-RAAF servicemen and servicewomen appear to prefer to keep alive the friendships they formed in their squadrons or musterings than join RAAFA.

Our research has identified around thrifty squadron or mustering-related groups or associations formed by contemporary serving and ex-RAAF personnel, which have no affiliation with the Air Force Association.

This should not surprise. The pervasive bond within squadron and mustering-based RAAFA Branches from the WWII, Korea and Vietnam eras attests to the strength of the friendships forged in adversity or nature of service, and sustained by comradeship and reciprocated support.

[1]This article was prepared by R.N. (Dick) Kelloway, National and NSW VP AES, NSW-ACT Chair of TIP, practicing advocate and pension officer for RAAFA, the RSL and APPVA

On another tack, the Association has maintained a hierarchical structure that, enshrined in the Constitution, practices "command and control" from National Council through the Divisions and on to the Branches. Formal initiatives start at the top, and grassroots members are expected to "hook in".

Earlier attempts to make the Association "more attractive" to contemporary veterans and personnel have been thwarted by the perception that RAAFA sees itself as being "by tradition" the only "real" organisation that ex-RAAF personnel should join.

A corollary has been the view (sometimes overt, sometimes implicit) that, if "you want to receive the benefits of membership", you join on our terms and play to our rules".

A long-standing misapprehension is that RAAFA is an officers' (especially ex-senior officers) "club". The membership in many Branches puts a lie to the view; however, the stories are retold too many times of someone receiving "the cold shoulder" because he or she had not been commissioned.

On the other hand, Branches that are thriving offer comradeship, enjoyable activities for Branch members and their families, easy access to proficient pension and welfare support, and are typically "rank-less" and "post-nominal-less".

From another perspective, by its operational doctrine and support activities, the contemporary RAAF is a "network organisation". Systems complexity necessitates, and information and communications technology (ICT) enables, high levels of functional autonomy across the full range of activities from technical support to force application.

Finally, contact with contemporary veterans, RAAF and ex-RAAF personnel reinforces the importance of family orientated activities and, especially, the penetration of social media into their community. The group's use of social media has facilitated, indeed strengthened, their mutual caring and support.

Interpretation

The preceding considerations suggest that there is a mismatch between what the Air Force Association "is" and what it "needs to be". If our Association is to have a place in the future lives of contemporary and future generations of veterans, RAAF and ex-RAAF members and their families, we must change.

This deduction suggests that, to have a future, the Association must address three essential needs:

- inclusiveness
- companionship
- support

To be "inclusive", we must accept that rank and decorations are irrelevant to the majority of Association members. **But**, respectively, **have their place** in facilitating access to senior ADF staff and in lobbying government and departments, and as adjuncts to commemoration.

To provide true "companionship" we must accept that squadron and function-related groupings satisfy a strong "tribal" need. To view such groups as inimical to the Association's survivability is self-fulfilling. Sensibly, we will actively promote the groups and seek mutually beneficial accord with them.

"Support" necessitates a wide range of activities, from representing members' needs to Government, through facilitating pension claims and appeals, to helping members and their families navigate social support programs.

I believe the National Council acknowledges the preceding needs.

It is taking steps to identify what may influence the Association's future. It is exploring the options that will put "meat on the 'needs' bones". It recognises it must redirect and reinvigorate the Association. And, it is starting the transition into an organisation that is relevant to the future.

Some of Council's key developments are addressed below.

ADSO Membership

Successful lobbying of Government is essential to ensuring the full beneficial entitlements in rehabilitation and compensation legislation, retirement benefit and military superannuation schemes, and the various support programs is achieved. To maximise the effectiveness of its lobbying, RAAFA is a founding member of the Alliance of Defence Services Organisations (ADSO) - one of whose recent successes is the "Fair Go" defence superannuation campaign.

There are a range of other representational and lobbying needs to be progressed both by RAAFA alone and through ADSO. These include wider interpretation of the *VEA 1986* "incurred danger" test to facilitate access to currently unavailable benefits for WWII escapers and evaders and Berlin Airlift crews, and exposure to toxic materials and contaminants in warlike, non-warlike and peacetime service.

Ultimately, lobbying is a critical function for RAAFA. As Budgets are limited, allocations for benefits and programs are the end-product of a political process. Because of its nation-wide membership and representational power independently as well as through ADSO, the Association has a lobbying capacity that it would not have were it smaller or of less geographic scope. This is a significant value-add for members.

Workshops

Value-adding is, however, not an absolute. It does not exist in isolation. Rather, it is relational. To achieve its full potential, people must recognise, want, support and pursue its potential. In other words, to be valuable, its value must be eked out and exploited.

In essence, existing National and Division strategic and business plans have assumed (either specifically, or implicitly) that the value added to members' lives by their membership is self-evident. Declining membership suggests that this assumption is not well founded.

Consequently, under National auspices, the first day of the 2013 New South Wales Division's AGM was devoted to five workshops followed by a plenary session. The aim was to focus delegates' attention on five key issues that seemed to be key to the future. The "key issues" had emerged from two workshops that were attended by committee members of NSW north coast and Sydney metropolitan and Newcastle area branches.

As this article goes to press, a workshop series is beginning with serving personnel from various RAAF Groups. Open questions and free-ranging discussion are intended with the objective of identifying the perceptions, needs and wants of contemporary veterans, serving personnel and their families. These will then, along with the views of current members, become the foundations and "way points" for the Association's transition.

Affilation

If we accept the historical and contemporary lesson from the strength of squadron and function-related affiliations, we would not expect these groups' members to forsake their friendships and transfer to the Air Force Association. Rather, the Association would encourage (virtually) any form of affiliation that these groups found in their interests.

This approach does not, however, suggest a one-way street. All parties are the beneficiaries. RAAFA gains the additional lobbying power of a wider and deeper membership and the mandate to represent a wider range of interests than it currently has. And, the currently unaffiliated groups acquire a voice at the level of government and department that the currently do not have.

Clearly, to be implementable, the potential mutual benefits of affiliation will have to be, and have to be accepted to be, stronger than organisational autonomy. As discussed next, serving and ex-RAAF members access to an ICT-facilitated, nation-wide welfare, pensions and advocacy support service is one of the benefits that may be influential.

National Veterans E-centre

Around 15 years ago, Victorian ESOs began to amalgamate their practitioners into "veterans centres". Amalgamation enabled longer service hours and a wider range of support services in one location. In the last four years the Department of Veterans' Affairs (DVA) has been encouraging ESOs in the other States to form similar centres. The Veterans e-Centre is a result of the Association's interest in improving access to and the quality of services provided by its practitioners.

The rationale for creating an e-Centre is that an ex-RAAF practitioner will understand the RAAF working environment better than a non-RAAF practitioner and is better equipped to apply the legislated instruments (SOPs and GARP) to an RAAF/ex-RAAF claimant or appellant. If this rationale is valid, connecting RAAF/ex-RAAF claimants with an ex-RAAF practitioner should improve the quality of their claim or appeal.

Currently, the many thousands of ex-RAAF members and their families can access one of only 4 trained Advocates, 14 Pension Officers or 14 Welfare Officers across Australia who are authorised by the Association to support members. There are, of course, many more ex-RAAF, trained and authorised practitioners working from the branches or sub-branches of other ESOs (Ex-Service Organisations). But, there is no central location for finding these practitioners.

National Council has successfully put this argument to the Department of Veterans' Affairs, and has received $10,000 this financial year to create an ICT-based national-wide welfare, pension and advocacy referral service. Fortuitously, the Association's Victoria Division had joined with other ADSO-member ESOs in Victoria to create an almost identical system (ACNet). The project is being driven by the Victorian Branch of the Defence Force Welfare Association (DFWA). Its President and our project officer are already progressing a cooperative approach.

Potentially, implementation of a nation-wide RAAFA referral service can greatly facilitate development of the ACNet. DFWA is understood to be itself interested in developing a nation-wide ACNet. Were our cooperation to lead to a RAAFA nation-wide module within the ACNet server, or a separate server linked to ACNet, we would effectively be developing a model for DFWA's national roll-out. This would be further facilitated were we to invite ex-RAAF practitioners in other ESOs across Australia to list with the e-Veterans Centre.

A potentially very significant value-add is inherent in the e-Centre concept and cooperation with DFWA.

Advocacy

Earlier in this article I have used the term lobbying. A more "politically-correct" term is advocacy, although this term is also applied to the advocate's role in appeals to the Veterans Review Board and Administrative Appeals Tribunal. Use of the term therefore needs to be contextually clear. In the following discussion I am using the term in the sense of lobbying for a desired outcome.

In the past twelve months National Council has taken a lead role, both within ADSO and also independently, in progressing serving RAAF and Association members' interests. Some of the issues in which we have been active include responding to the Foreign Affairs Defence and Trade Committee's reference on the DLA Piper Report and the creation of a cell within DVA's Melbourne office to process compensation claims arising from abuse in ADF service, the Review of Round 15 BEST Grant guidelines and assessment criteria, and the DVA-ESO workshop to review the Legislation Draft of the Veterans' Affairs Review Bill 2013.

Two other activities, each which has potentially fundamental implications for the future provision of welfare, pension and advocacy support, are discussed in more detail next. Our active advocacy on behalf of our members, and potential members', interests represent a very substantive value-add.

ESO Round Table Working Party

In their December 2010 Review of DVA-Funded ESO Advocacy and Welfare Services, the consultants recommended that TIP (Training and Information Program) volunteer presenters should be "accredited" in accordance with Vocational Education and Training standards, and ESOs should mentor and provide on-the-job training for TIP-trained people before they are authorised as practitioners. Neither recommendation has yet been implemented, although TIP is well into transitioning to competency-based training methods.

In March 2013, the ESO Round Table (ESORT) and the Secretary DVA collaborated in a review of the current preparation of practitioners. The TOR for the review focused on improving the quality of primary claims and reducing the number of VRB and AAT appeals, consistent with the recommendations of the 2010 report. A working party of four ESO representatives (WP) was formed, supported by a DVA secretariat. Our representative led the report writing task and presented the WP report to the August ESORT.

The WP deduced that the outcomes sought in the 2010 Review were not achievable unless ESOs, TIP and DVA acted on their joint and individual responsibilities within a selection, training, and claims/appeals system. The report noted that DVA has been endeavouring for some time to engage ESOs and TIP in a "partnership", and concluded that changes of habitual attitudes were essential to its formation. The WP recommended that the TIP Ten-Year Rolling Plan translate into a Ten-Year Partnership Transition Program.

The WP report was accepted as is by the members of the ESORT and DVA. If it is implemented, the Association will have played a strong and vital role in enhancing the likelihood of success of veterans' and ex-ADF members and their families' claims and appeals.

DVA Discussion Papers on "Advocacy" and "Single Path Appeal"

Under the ongoing effects of restricted budgets and efficiency dividends, DVA claims assessors currently have backlogs of as many as 200 claims. The time being taken to process claims is also significantly beyond the targets DVA has established. The VRB and AAT are encountering similar difficulties. Inferior and incomplete claims and appeals add significantly to delegates' workload as well as frustrating claimants and appellants. Establishing and maintaining harmonious working relationships within the partnership is unacceptably difficult in such a situation.

Concurrently with the Working Party's deliberations, DVA therefore released two discussion papers to elicit ESOs' responses to possible changes in the way in which claims are processed and claimants/appellants are represented. The discussion papers were released with the caveat that they were neither exclusive of other options nor represented the Department's intentions. Be that as it may, there appeared to be a strong underlying theme that claims would be better prepared and claimants better represented if practitioners were legally qualified.

Without over-focusing on the implicit theme, the Association lodged a strong representation on the merits of the discussion papers and an equally strong representation on its weaknesses. Senior DVA officers commented on the quality of the submission and its synergy with the WP Report. The implication is that the two inputs are seen by DVA to represent robust foundations for its future development of the claims and appeals system. Better prepared claims and appeals not only are more likely to be successful, but will also reduce the stress on already severely overworked delegates.

By its advocacy, the Association has therefore advanced the interests of its current and future members. Equally importantly, the quality and success of its representations have been noted. This augurs well for the reception and power of the Association's future lobbying on behalf of its members.

Conclusion

At a time when the Air Force Association's membership roll is under stress, the National (and Division) Council is actively seeking, and indeed implementing, ways of adding value to membership:

- We are inverting our decision-making structure so that members' needs are the focus at the National level.
- We are embedding modern ICT technology to facilitate transition from a hierarchical to a network organisation.
- We are re-orientating our relationship with other ex-RAAF organisations.
- We are seeking to strengthen access to and the quality of the support services we are providing.
- We are taking actively advocating changes in legislation and policy to maximise their benefit for our members.

INVITATION

If you would like to contribute to, or participate in the reinvigoration and redirection of RAAFA, or have any queries or comments on any AES matter, I'd like to hear from you either through Lance Halvorson, the Wings Editor, or direct to me at: <richard.kelloway@bigpond.com>

Transcript - Veteran Mental Health Strategy Launch

Warren Snowdon: Can I say what a privilege it is to be here, with so many eminent people and just to give you some background to why we are here and to announce the new Veterans' Mental Health Strategy.

It will be available in the *(hardcopy)* form and online. It provides a ten year framework, underpinning the $26million announced in the budget for this purpose. Most components of this package will commence from July 1, 2014.

I think it is important to understand what the initiatives are within package:

Firstly, $14.6 to extend existing arrangements for immediate access to mental health treatment without the need to make a compensation claim, and that is really very important;

$1.1m for post-discharge health assessments by GPs;

$6.4m to extend VVCS coverage to include specified peacetime service and family groups; and

$1.7m to make improvements to the processing time for compensation claims.

I want to acknowledge the work that is being done both in the Department of Veterans' Affairs and within the Department of Defence and the unity of purpose that is around this strategy across those two domains.

Since I have been working in both these portfolios what I have seen is a coming together of the two organisations, so that they are seeing a seamless process for serving men and women who then leave the Defence Force as veterans. We want to make sure they are getting their care whilst they are in service and that there is a seamless transition out of service. At the same time we want to ensure they have access to the services they need for any particular condition they may have.

There are three principles in this strategy - Prevent, Recover and Optimise.

There are six strategic objectives:

- Promote mental health;
- Strengthen the workforce capacity;

- Enable a culture of recovery;
- Strengthen partnerships;
- Build the evidence base; and
- Ensure quality health care.

Now the clinical reference group, which is meeting for the first time, is an important ground. I would like to congratulate and thank all of those who have come forward to participate in that group.

Without wanting to embarrass any of them who are here today, I will just go through who they are because I think it is quite important.

Firstly, Doctor Graeme Killer, an apt name Dr Killer (chuckles). He is a great bloke, who has done great service to this country. He will lead this group.

It is made up of psychiatrists, psychologists and a social worker. I'll just go through the members in no particular order.

Dr Sam Hay - General Practitioner and Army Reservist.

Prof Malcolm Hopwood - Psychiatrist and secondary mental health provider.

Prof Richard Bryant - Clinical Psychologist and secondary mental health provider.

Ms Jan Alexander - Social Worker and secondary mental health provider.

A/Prof Jane Burns - CEO, Young and Well Cooperative Research Centre.

Dr Malcolm Battersby - Psychiatrist.

Prof David Forbes - Director, Australian Centre for Post-Traumatic Mental Health.

Prof Alexander McFarlane - Professor of Psychiatry and head of the University of Adelaide centre for Traumatic Stress Studies.

Prof Ian Hickie - Psychiatrist.

Prof Phillip Morris - DVA Psychiatry Advisor.

This is a very eminent group of Australians and I want to thank them for coming together. They will have the responsibility of providing the clinical oversight of this strategy and providing ongoing advice to the Department of Veterans' Affairs and through them to the Department of Defence about the nature of the services we are providing.

I'm extremely pleased to be here with this wonderful group of people.

Questions -

Journalist: Dr Killer says there is not going to be a tsunami of people coming forward, but we have a very large number of people re-entering the community with operational service. Are we looking at a doubling, tripling, of the requirement for these services.

Snowdon: Well frankly, we are not certain what the demand will be. Past experience tells us it is unlikely to be a tsunami, there will certainly be an increase and what we have to do is manage that increase however big it might be. But I don't think it is wise to use that word, tsunami, because that says to us there is going to be, how many? Who knows?

What we have to do is respect the fact that there will be soldiers, sailors, airmen and women who come back from service who will require access to help and we are here to provide it, no matter what the number is.

Journalist: The fact that border protection, humanitarian service is now counted in people being able to access care, what does that signify about those sorts of things?

Snowdon: It recognises that they may have gone through traumatic experiences, and may have suffered as a result. We should acknowledge the range of things we are talking about here. We are not only talking about PTSD, but we're talking about anxiety, depression, alcohol and drug abuse. A whole range of different things which people may be affected by as a result of their service.

Aceh (Indonesia) and the humanitarian relief (following the 2004 tsunami disaster), people saw horrendous things. We want to make sure that if there is, as a consequence of that, if they need to see someone that we can provide that opportunity.

Journalist: There was an article in the SMH on the weekend, about the lack of services for women, who had gone through sexual abuse in the Defence Force. Is there anything in particular addressing that?

Snowdon: There is. But firstly, it is not a new report, with great respect to the Sydney Morning Herald. That report was commissioned in 2010, and we received it last year. We are working on our response to it. We've set up a reference group made up of women, on how we respond to women who have seen service.

I'm confident that with the array of things we have in place now, and the awareness we have of looking after all members of the Defence Force, regardless of gender or what service they are in. That we will provide the appropriate service. But we have to make sure we do it right and we keep our eye on the job. We've got to make sure that where people have issues, if they are women, that we have got to look after them properly and we intend to do that.

Journalist: With the tough times financially at the moment, all Departments are facing financial astringency, is there going to be enough resources to do this properly?

Snowdon: We think there is, for our purposes absolutely. The Defence budget is around $400million in health and there is adequate services available within the Department to deal with current serving members. There is also through the veterans budget, apart from the money we have announced today, we already spend $166million a year on mental health. This additional money will provide additional services, but I'm confident it will be sufficient.

Air Commodore Gordon Henry Steege DSO DFC MID

31 Oct 1917 - 1 Sep 2013

Born in Chatswood, New South Wales, on 31 October 1917, Gordon Steege joined the RAAF in July 1937as an Air Cadet for pilot training at Point Cook. He graduated as a Pilot Officer in July 1938 and was posted to No 3 Squadron to fly Hawker Demons.

On the outbreak of war in 1939, he was posted as Adjutant to No 11 Squadron, Port Moresby. The squadron had just been formed with two ex-Qantas Empire flying boats and two Seagull amphibian aircraft.

On 5 May 1940 Flying Officer Steege was posted to No 3 Squadron at RAAF Base Richmond, Australia. The squadron embarked on RMS *Orontes* at Sydney on 15 July 1940, and disembarked from HT *Dilwara* at Suez on 23 August.

In September, he was one of four pilots and nine ground crew of No 3 Squadron who were attached to No 208 Squadron RAF in the Western Desert for flying duties. The pilots flew Gloster Gauntlets from 102 MU at Abu Sueir and proceeded on attachment to No 208 Squadron RAF. No 3 RAAF Squadron had six Lysanders, 12 Gladiators and the six Gauntlets, detached with No 208 Squadron. FLTLT Steege saw action, flying Gladiators during the First Libyan Campaign, then Hurricanes during the retreat of spring 1941. He was awarded a DFC in April and Mentioned in Despatches (MID) early in 1941.

As a Squadron Leader, he was posted in May 1941 to be Commanding Officer of the newly formed No 450 Squadron. Due to a pilot shortage, the squadron combined with No 260 Squadron RAF for operations over Syria in June and July 1941. No 450 Squadron then became a Hurricane OTU until the end of 1941, when it moved to Egypt for operations, before re-equipping with Kittyhawks

Following a posting in May 1942 to the Middle East Staff School at Haifa, he returned to Australia at the end of the year. He was promoted to Wing Commander and in May 1943 took command of No 73 Wing in Port Moresby, with three squadrons of Kittyhawks, and one each of Spitfires, Beaufighters and Bostons. He led the Kittyhawk squadrons in strafing operations from Kiriwina, and the Kittyhawks and Spitfires from the Admiralty Islands in March 1944. In this period, he was awarded a DSO and promoted to Group Captain.

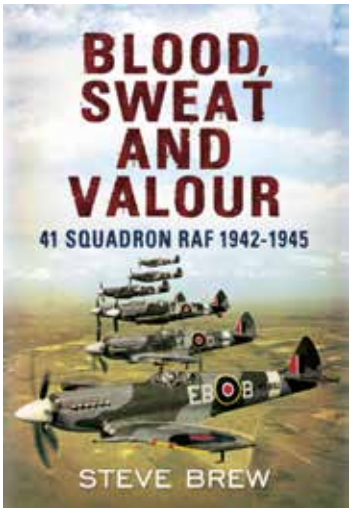
In mid-1944 he led three Kittyhawk squadrons to Momote, Los Negros/Manus Is, to form No 81 Wing, for operations against Japanese forces in Dutch New Guinea until the end of 1944. He then returned to Australia and was appointed SASO, HQ, Eastern Area, Sydney in 1945. He ended the war with 3 biplane victories and a total of 8 aircraft destroyed.

He attended the US Army and Navy Staff College from May 1945 to January 1946, before becoming Director of Operations at RAAF HQ in Melbourne. Late in 1946 he resigned from the RAAF and became a Patrol Officer and Assistant District Officer in Papua New Guinea for four years.

At the end of 1950 he rejoined the RAAF as a Wing Commander during the Korean emergency, and commanded No 77 RAAF Squadron in Korea. In 1953 he was a member of a Military Mission to the French in Indo-China before he was appointed Assistant Secretary of the Defence Committee. On promotion to Group Captain, he commanded the base at Canberra, where a Dakota Transport Wing was located.

He was the Australian Military Adviser's Representative at the Military Planning Office, SEATO HQ, Bangkok, 1959-60, and then for four years, Director Joint Service Plans, at RAAF HQ, Canberra. On promotion to Air Commodore in May 1966, he was, in turn, OC RAAF Base Amberley, Butterworth and Edinburgh. He then was posted as SASO, HQOC until his retirement in October 1972.

Following his retirement, he lived at Palm Beach, New South Wales, when in 1983 he became a consultant for Martin Marietta Overseas Corporation, a US Aerospace company.



Blood, Sweat and Valour

41 SQUADRON RAF, 1942-1945

Author: Steve Brew
UK Publisher: Fonthill Media (www.fonthillmedia.com)
Australian Distributor: Woodslane (www.woodslaneonline.com.au)
ISBN: 978-1-78155-193-6
Cover: Hard cover with dust jacket Pages: 992 Pictures: Over 300 B&W images, plus caricatures, sketches, aircraft profiles, maps and tables
Price: AUD$75.00
Further information: http://brew.clients.ch/bsv.htm

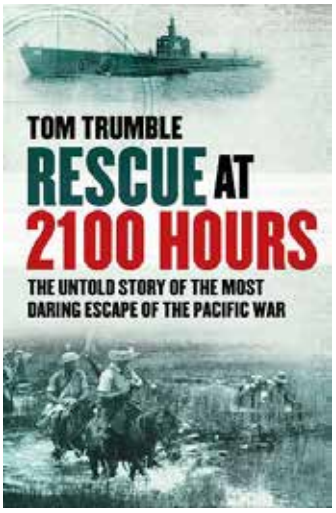
Formed in 1916, 41 Squadron is one of the oldest Royal Air Force squadrons in existence. The unit saw service in the First World War, on Policing Duties in the Aden Protectorate during the 1930s, throughout the Second World War, and more recently in the First Gulf War and Yugoslavia. Until now, however, its History has not been written.

Blood, Sweat and Valour, by Brisbane author and 41 Squadron Historian Steve Brew, is the first comprehensive study of this illustrious squadron, concentrating on its wartime activity between August 1942 and May 1945. The work examines the unit's role within battles, operations, offensives and larger strategies, and details experiences made by the pilots and ground crew participating in them.

The Squadron's actions are often revealed for the first time, through records that have previously not been available. The author has drawn heavily on unpublished primary sources, including a large number of logbooks, interviews and personal accounts.

41 Squadron's own archive was made exclusively available to him for the purpose of writing this work. "This is therefore a unique repository that is being revealed for the first time", stated Gp Capt Richard Davies, who commanded 41 Squadron from November 2009 to March 2012.

Blood, Sweat and Valour evokes the feeling of the period, portraying not only a factual account but also one that captures the colour of life on a Second World War fighter squadron, with a balance between material of a documentary nature and narrative action, intertwining fact with personal recollections of events, serious events with humour, and sobering statistics with poignant after-thought.



Rescue at 2100 Hours

Author: Tom Trumble

Website - http://tomtrumble.wix.com/tomtrumble
Penguin website - http://www.penguin.com.au/products/9780670076239

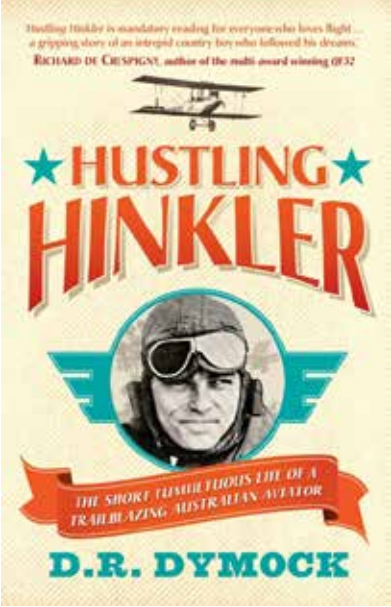
Book Trailer - http://www.youtube.com/watch?v=ZjagP82LMzE

February, 1942. The Japanese invasion of Timor has begun. Attempts to evacuate a group of 29 Australian airmen, left behind to keep operational an airfield until the last moment, are thwarted. So begins one of the greatest stories of survival and escape of the Second World War.

The Untold Story of the Most Daring Escape of the Pacific War" (Penguin, 2013), has just been published. It's about a group of Australian airmen who were stranded on Japanese-occupied Timor for 58 days, sometimes referred to as 'The Penfoei Pedestrians'. The bombing raid on Darwin thwarted the scheduled evacuation of the group and then attempts to rescue them by flying boat were abandoned after the Empire Flying Boat detailed to collect the men was destroyed in the raid on Broome. Consequently, the airmen were stranded on the island with no food and next to nothing in the way of medical supplies.

They suffered terrible privations, four of the 29 would die from malaria and snakebite, before the remaining airmen were rescued by an American submarine, the USS Searaven. The author has a personal connection to the story; his grandfather, Bryan Rofe, was the officer in command of the stranded airmen.

Flying Officer Bryan Rofe.



Hustling Hinkler

Author: D.R. Dymock

Published by: Hachette Australia

ISBN: 9780733629839

Price: $35.00

Available from most good bookstores

Bert Hinkler is an Australian hero in the truest sense of the concept. Eighty years after his death on a lonely Italian peak, he is still a pioneer that is defined by his achievements rather than his headlines. Unfortunately, then as now, forging frontiers and fame can be strange bedfellows.

While the American solo conqueror of the Atlantic, Charles Lindbergh, is still hoisted onto the shoulders of an admiring world, Bert Hinkler has seemingly slipped between the cracks. However, rather than solely stemming from the tyranny of time, Hinkler sometimes slipped between the cracks at the height of his fame and often through his own choices.

Hustling Hinkler examines how, despite his incredible achievements, the aviator never truly harvested the riches of his fame. It cites his humility, single-mindedness and complicated personal life as just some of the contributing factors that led to tensions between his task at hand, the media and authorities. At times, the very qualities that served him so well in the air, hampered his progress in everyday life.

This book is not a heavy-in-the-hand biography, but the story of a man, his times and his passions. In rounding some of the harsher technical edges, Bert is truly humanised and perhaps better understood. Additionally, intriguing family correspondence sheds new light on his very private life and the aftermath of his tragic death. Consequently, *Hustling Hinkler* will appeal to a broad audience and stands to spread his amazing story across an entirely new range of readers.

In life and death, Bert Hinkler was a rare blend of hero and enigma. Darryl Dymock has wonderfully and respectfully recalled his achievements and revealed new perspectives of this quiet, complex Queenslander. *Hustling Hinkler* is a book that not only examines the daring lone flier, but helps us to understand the man. As such it is fascinating reading for anyone with an interest in flight, history or the human condition.

By Owen Zupp

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PITTS SPECIAL – These two words immediately conjure up mental pictures of a biplane with dashing looks roaring and tumbling through the air apparently ignoring the laws of aerodynamics and common sense simultaneously. Every air show since I can remember has had one sort or another of these flying machines thrilling the crowds. Arguably one of the best known air show pilots in Australia, Chris Sperou, has thrilled crowds for many years in his Pitts Specials, the latest being his Super Stinker with its large depiction of cartoon skunk looking very pleased with himself on the side of the plane.

I've been very lucky having Chris as a mentor and coach at Murray Bridge where I keep my Pitts S2A. A key part of Chris' air show routine is with his partner Warren Stewart who flies their Debonair. Few realise that Warren is an accomplished commercial pilot (fixed and rotary wing) and, more importantly to me, a very accomplished LAME and expert on all aspects of Pitts Special tuning and maintenance. Warren looks after my Pitts S2A and often jokes that he has gone full circle in life from being in senior management with engineers working for him to being a hands on mechanic again.

Curtis Pitts began the design of a single-seat aerobatic biplane in 1943 with the prototype's first flight in September 1944. Since then, the design has evolved and many one and two seat versions produced. However, the Pitts S2A still remains quite close to the original in concept and design. Originally, Curtis Pitts worked on the design of a two-seat aerobatic trainer version, the S2, which first flew in 1967 and gained its type certificate in 1971. Factory-built aircraft were then produced by the Aerotek Company at Afton, Wyoming through the seventies until 1982. Many Pitts enthusiasts have told me that, although not the most powerful, this model with its 200 hp (149 kW) Lycoming AEIO-360-A1A is the nicest and most balanced to fly of all the two seater Pitts.

I often describe a Pitts as being like a penguin – a clumsy beast on land but awesome in its preferred element. With only 12 tail wheel hours, a few hundred GA hours and nearly 60 years of age, it certainly took me a while to learn to land the Pitts S2A without anxiety. One of the great advantages of a two seater is that you can put an instructor in the front seat while you learn to land it and master basic aerobatics. With Chris Sperou generously taking time to teach me, I found I learnt a lot relatively quickly. Although, I must admit I never enjoyed learning to tumble off the top of a 45 degree up-line into an inverted spin and recovering.

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