



Log of the
NAVAL WARFARE OFFICERS' ASSOCIATION



ENGAGE!

NAVAL WARFARE OFFICERS' ASSOCIATION

www.warfareofficers.net.au

formerly
The Anti-Submarine Officers' Association,
and incorporating
The Saint Barbara Association—Australian Division

Patron
VICE ADMIRAL C.A. RITCHIE AO RAN (Rtd)



Volume 9

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THE OBJECT OF THE ASSOCIATION

"To preserve, promote and foster amongst its members, by such means as the Committee may from time to time deem appropriate, the spirit of patriotism, loyalty and service to the Nation and the Navy enjoyed by members during their period of service and to perpetuate the spirit of comradeship so generated."

DATES FOR YOUR DIARY 2014

ANZAC Day Reunion, AGM	Friday 25 April
Annual Mess Dinner - HMAS Watson	TBA
Winter BBQ	RSYS Sunday 20 July
Annual Luncheon - Sydney	Friday 31 October TBC
Annual Luncheon - Canberra	TBA November

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President's Report March 2014

Just like 2013, this year promises to be a very significant one for the Navy and the nation. The centenary of Anzac commemorations will begin later in the year, not only the commencement of the World War 1, but also the departure of the ANZACs from Albany. With the SYDNEY - EMDEN story likely to gain significant national prominence, it's an important time for us all to be highlighting the value of our Navy in the forging of our nation.

Closer to home, planning is well underway for ANZAC day this year - both for the marches and the gatherings to follow. In Sydney, MV Radar is in refit this year, but we have access to an even better ship MV Proclaim, with even more space available.

It would be great to get as many as we can to this event. It's always a good day and I encourage you to invite a mate to participate in the camaraderie and have a great day on Sydney Harbour. We also encourage as many as we can to make the march, and again we need to look to each other to get people to come along - it's not necessary to attend the march to get onboard. Likewise in Canberra, Steve Hooke has arrangements well in hand for the Day, albeit it with some slight modifications after the march this year.

Members would know our magazine Engage is published three times a year. The cost of publishing this magazine has been escalating over time. We are very fortunate that one of our members, Peter Maxwell, has kindly offered to meet the magazine's printing and distribution costs. This is a very generous offer indeed and on behalf of the Association I would like to thank Peter very much. It is very much appreciated.

On a related subject, Engage can only be promulgated if there is something to publish. We are in desperate need of an editor for Engage. It's not an onerous task but it does take some time a few times per year. Greg Glancy has unfailingly helped us out over the years in this role, and is in need of a break. He is more than willing to assist with a handover and future editions as he is able. If you are interested in volunteering, even for a fixed or short period, it would assist us, and of course the wider membership, greatly. As a key part of the Association, the editor has a free reign in managing the publication so please make contact with the secretary, David Flakelar, or me if this role has sparked an interest. The Association needs you! The alternative of sending out a disparate group of Flyers is unpalatable.

I am sure members both retired and serving will have been very proud of the International Fleet Review (IFR) last year. It was a fitting culmination to 100 years of Service, and an excellent way to recognise the Navy's role in Australian society over that period. The strong public support for the Navy throughout that week was palpable, and it is great to see that level of support has continued unabated since then, during some challenging times. During the IFR, Chief of Navy launched a new charity called *Keeping Watch*. It was borne from a desire to assist those in the Navy in need, and hopes to draw on community spirit and the benevolence of serving and retired officers like us, and our Association. *Keeping Watch* builds on the role of the RAN Relief Trust Fund (RTF). Its aim is to enhance Navy's capacity to look after its own people in need. Donations are tax deductible and funds will be prudently managed by the Board of the RAN RTF. It has the personal support of the Chief and his senior leadership team. More details can be obtained at the website www.keepingwatch.org.au. Donations can be made online.

LCDR Tina Brown, our Membership Secretary, leaves on maternity leave and we wish her well. She has been replaced on the committee by LEUT Ross Clarke whose contact details appear at Page 2.

Finally, a reminder the AGM will be held onboard Proclaim on Anzac Day. I look forward to seeing a large gathering in both Sydney and Canberra and details for the Canberra community will follow.

Yours aye
Davyd Thomas
President

Honorary Life Members (in alphabetical order)

Peter Cosgrove, Guy Griffiths, John Holman, David Leach, David Price, Brian Robertson, Ray Williams

Friends of the School of Maritime Warfare - Continuing the Golden Thread

LCDR James Edmondson RAN

Do you have any friends?

(Although, you might not be the best one to answer that question.)

An Invitation from Current Management

Not long ago, at a PWO course graduation, a senior officer told the newly qualified officers that they now had carriage of a golden thread that connected them to every generation of naval officer. They were gently informed that the successes, traditions, victories, lessons and culture of their heritage of this naval service were intrinsically linked by this thread, and that it was both an honour and a great responsibility to be the latest custodians of this delicate, yet priceless connection. The training of naval warfare officers is the most important job in the RAN and it cannot be done alone or in isolation, this was why, with the help of the NWOA, it was decided to create the “Friends of the School of Maritime Warfare”.

The School of Maritime Warfare (SMW) at HMAS Watson was formed in January 2012 from the amalgamation of the Principal Warfare Officer (PWO) faculty and the Combat Systems Operators faculty (CSO). The concept behind the “Friends of the SMW” was to connect distinguished members of the naval community with officers undergoing PWO training. The SMW directing staff wanted to add a layer of historical context upon the education and training of PWOs by inviting these naval members to discuss their leadership lessons from their time as junior officers, with particular emphasis, if relevant, on their time as PWOs.

The format of these gatherings has taken the shape of an informal, fireside chat over coffee at the SMW in Captain Darling building at Watson. Typically, these sessions involve a short monologue by the guest speaker, followed by an opportunity for students and guests to ask questions. Since the first session in January 2013, there have been 8 “Friends” and generally these sessions take place every 2 months on an opportunity basis during the PWO course. The audience is not restricted to the current PWO course; officers and senior sailors from across the warfare community are invited to attend.

Currently the Friends of the SMW include both retired and serving senior officers, including former Chiefs of Navy and Fleet Commanders. Almost all have served in combat as junior officers. The stories and lessons related during these meetings have been thought provoking and incredibly enlightening. The subject matter is wide ranging from kamikaze attacks at Leyte Gulf to NGS in Vietnam; generating operational capability for Gulf War 1 to the birth of the RAN PWO course; Command of CTF 158 in the Northern Arabian Gulf to UK operations as a Royal Marine and, more contemporarily, command of a patrol boat during operation resolute. Each session has succeeded in not only contextualising what the PWO students are learning, but they also force the students to raise their eyes from their studies to have a good, hard look at the reality of maritime warfare through the experience of others who have gone before them.

This programme has been exceptionally well received by the PWO students and will certainly be continued with the commencement of the next PWO course, number 51, in May this year. The list of the FoSMW is not closed, and members of the NWOA with a story to tell and desire to help the next generation of warfare officers to keep the golden thread intact are encouraged to contact the OIC SMW, LCDR Ken Bailes RN kenneth.bailes@defence.gov.au, to arrange a visit to the *alma mater* of maritime warfare in the RAN.

1913 - AUSTRALIA'S FIRST BLUE-WATER FLEET

Australia celebrates 1 March 1901, the day all existing naval forces passed from state to Commonwealth government control, as the birth of the newly federated nation's navy. Since Charles Bean first published his stories of the Anzac landings, Australians have also understood that 'In no unreal sense it was on the 25th of April 1915 that the consciousness of Australian nationhood was born.'¹ However, eighteen months before Gallipoli, on 4 October 1913, an event took place that was described in very similar terms, representing not only the 'promise of Federation' but also the nation's 'coming of age'.² On that day, directly following its ceremonial entry into Sydney Harbour, the newly arrived Australian 'Fleet Unit' officially assumed responsibility for the defence of Australian interests in Australian waters.

The Royal Navy of the early 20th century was the world's pre-eminent maritime force, and by 1913 had been the foundation of Australia's defence for 125 years. By the late-19th century maritime strategists viewed the Empire's security as being guaranteed by an unrivalled Battle Fleet based in Europe. Any potential enemy would be defeated in a decisive naval battle in northern waters, leaving little scope to deploy any real power against Britain's overseas dependencies. The only credible threat against the outer empire would come from raiding cruisers operating independently against British sea lines of communication.



The flagship, HMAS Australia, leads the Fleet Unit into Sydney on 4 October 1913
(Percy Spence - Courtesy of the Bridgeman Art Library)

To deal with this possibility, the Admiralty had developed a global system of naval stations fielding modest, detached squadrons of warships. The Australian Station had been defended by one such squadron since 1859. In essence, the British Admiralty believed in the indivisibility of the oceans and therefore saw the key to its continued dominion as a single, world-wide imperial navy controlled from London. There seemed little point in purely defensive sea-going forces, and for some years the British had actively discouraged any Australian colonial desire to acquire their own warships. It was feared that such forces would become a financial drain, neither suited for a global strategy, nor maintained at British standards of efficiency. Moreover, not only would independent ships be practically useless in war, but a colonial gunboat might easily precipitate an unwanted crisis through being viewed as a representative of the Imperial government.

As Australian trade and wealth increased, doubts among its citizens began to surface. What would happen in an emergency if the warships of the Royal Navy's Australian Squadron were deployed away from Australian waters? Would local cities and vital trade be left exposed to danger? Australian participation in naval affairs began in the 1860s with the creation of small colonial defence forces for coastal and harbour defence. But, as the Admiralty had warned, local authorities found it difficult to keep the ships fully effective.

Following an 1887 agreement between the colonial and imperial governments, Australia and New Zealand also began paying a subsidy towards the maintenance of a second modest Royal Navy force, known as the Auxiliary Squadron, which would be employed exclusively in Australasian waters. However, any semblance of local control over these assets ended with another formal agreement, signed in 1903, which saw the Auxiliary and Australian squadrons combined, and expected to reinforce the China and East Indies stations in wartime.

It was at this point that the new Australian nation's political aspirations began to match the advocacy of Australia's navalists. Led by men such as Captain William Creswell, calls grew louder for the creation of a substantial Australian manned and controlled naval force, capable of future expansion. But although the idea of an independent and effective Australian navy gained greater political acceptance, six changes of government between Federation and 1909 made policy formulation difficult.

Nevertheless, on 5 February 1909, Prime Minister Andrew Fisher took an important first step by ordering two River class torpedo boat destroyers from British shipyards. A third destroyer was also ordered, but on completion it was to be deconstructed and shipped to Australia. Reassembled at Cockatoo Island Dockyard in Sydney, the experience gained was expected to greatly assist in establishing a local shipbuilding capability. The three destroyers were intended to be the first members of a larger coastal defence flotilla, but it was at this point that external events re-directed Australian attention.

In March 1909, it became public knowledge that Germany's battleship building program had placed British supremacy in the North Sea under significant threat. Imperial sentiment was strong, and New Zealand offered to fund the immediate construction of a battleship for the Royal Navy, and a second if considered necessary. New South Wales and Victoria offered their own contribution if Australia did not match the New Zealand offer. Canada too, sought to help. The confusion of schemes resulted in a hastily convened imperial defence conference held in London during July and August.

To save costs, and allow for its own strategic concentration in the North Sea, the Admiralty had already been gradually modifying its opinion on the value of dominion navies. At the imperial conference, the First Sea Lord, Admiral Sir John 'Jackie' Fisher presented a coordinated naval scheme that no one had expected. Plans for small self-contained coastal forces, he deemed, would lead nowhere. Instead, he tabled a proposal for what he termed a 'Fleet Unit', suited particularly to match Australian aspirations, but applicable to most other dominions as well.

Fisher defined the Fleet Unit as being the smallest composition of warships manageable in peacetime, but still capable of use in its component parts in time of war. It would be a microcosm of a traditional fleet, consisting of a balanced selection of small, medium, and large-sized warships and their supporting auxiliaries. As a tactical formation, the Fleet Unit would be centred on a new type of fast, heavily-armed, but lightly-armoured capital ship of Fisher's design that came to be known as a battlecruiser. Not intended for the line of battle, the battlecruiser was well suited to defending trade in the outer empire; able to either outrun or outgun any opponent likely to be fielded by an enemy.

The Fleet Unit's other warfighting components would comprise three light cruisers to act as scouts and a flotilla of six destroyers to provide both coastal defence and screen the larger units when necessary. A flotilla of three submarines rounded off the force structure, offering the ability to conduct torpedo attacks on a stronger enemy during the day, while the destroyers filled a similar function at night.

Such a force represented a far more ambitious undertaking than any previous Australian proposals. Instead of supporting the existing British squadron, it would essentially supplant it. By itself, an Australian Fleet Unit would be able to patrol the trade routes far from local shores and field sufficient inherent strength, to defeat or deter any detached enemy squadrons that might threaten local commerce. Furthermore, either the entire unit or any of its components could combine with other Royal Navy or dominion units to form a powerful Imperial Pacific Fleet.

Successful integration with the Royal Navy would require high standards of personnel efficiency and the Fleet Unit also commended itself to this end, providing Australians with the full range of

experience in blue-water naval operations. Just as important, it offered the progression through different ship types necessary to offer a long-term career and achieve professional competence.

Training opportunities abroad with the Royal Navy, for both ships and individuals, would also ensure that both personnel and materiel were maintained at an identical standard, thus mitigating previous concerns regarding the creation of second-rate navies. In essence, the Fleet Unit concept provided the blueprint for an effective ocean-going navy; a navy that could be entrusted with both the defence of Australian waters, and offer a valuable contribution to the collective defence of the empire.

No other dominion would follow its lead, but on 19 September 1909 the Australian Cabinet agreed to adopt the Admiralty's proposal. The foundations had been laid, and just four years later the practical results of the Australian program, made their first public appearance in Sydney. On the morning of 4 October 1913, tens of thousands of citizens flocked to the harbour foreshores to witness the ceremonial entry. The starred blue ensign flying from each foremast of the seven ships attested to Australian ownership and encouraged reflection on the great sea power the nation now possessed and the responsibilities that this entailed.

Leading the newly arrived ships was the Indefatigable class battlecruiser Australia. She was followed by the two Chatham class light cruisers Melbourne and Sydney, and the older cruiser, Encounter, on loan from the Royal Navy pending the local construction of Brisbane. Last in line were the first three River class destroyers, Parramatta, Yarra and the Australian-assembled Warrego.

Construction of the three remaining destroyers was already underway at Cockatoo Island Dockyard. Furthermore, still building in Britain were the submarines AE1 and AE2, with more expected to be ordered shortly.



The Fleet Unit moored in Sydney Harbour, 4 October 1913. (RAN 75th Anniversary Collection)

Upon the outbreak of World War I, in August 1914, the RAN was arguably the most modern and capable small navy in the world, and the fleet proceeded to achieve everything expected of it. The only significant threat to local waters came from Germany's East Asia Cruiser Squadron. Fortunately, the presence of Australia, larger, faster and better armed than any of his ships prompted the German commander to abandon plans to attack Australian maritime interests. Thereafter, the possession of an effective navy allowed Australia to rapidly occupy German possessions in New Guinea.

More important to the future conduct of the war, it also ensured a sufficient degree of sea control to allow the safe convoy of Australian and New Zealand forces to the Middle East and European theatre of war. The destruction of the German cruiser Emden, by one of the convoy escorts, Sydney, demonstrated just how far the Australian navy had come, and offered final proof that its sailors were every bit as capable as their British counterparts.

Petty Officer Peter Cannon

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¹ Charles Bean, *The Story of Anzac*, Vol 2, Angus & Robertson, Sydney 1944, p. 910.

² George Macandie, *Genesis of the Royal Australian Navy*, Government Printer, Sydney, 1949, p. 288.

NUSHIP ADELAIDE ON THE MOVE

As these images show, in December 2013 NUSHIP Adelaide was hauled from Navantia Ferrol dockyard in Spain to Vigo in the south where it will be loaded into a heavy lift ship, and, weather permitting, depart Spain before Christmas. She is expected to arrive at the BAE Systems Williamstown shipyard in February 2014.



When completed, Adelaide will support more than 1400 crew, up to 18 helicopters and 110 tanks. It will also accommodate a 40-bed sick bay. Adelaide's sister (NUSHIP Canberra) is currently being fitted out at Williamstown.

Spanish shipbuilder Navantia, a subcontractor to BAE Systems Australia, constructed the hulls of both ships.

The superstructure, combat and communications systems are set to be completed in Williamstown.

Construction of the first LHD began in September 2008, with the hull arriving in Williamstown in October next year.



Have a look at <http://www.youtube.com/watch?v=GWx2AnVQYy8> for a guided tour of Canberra.

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“In my many years I have come to a conclusion that one useless person is a shame, two is a law firm, and three or more is a Government....”

John Adams [US President]

Ed. Thankfully things have changed since President Adam's time in the Chair.

How it all began!

In ancient Israel, it came to pass that a trader by the name of Abraham Com did take unto himself a young wife by the name of Dorothy. And Dot Com was a comely woman, broad of shoulder and long of leg... Indeed, she was often called Amazon Dot Com.

And she said unto Abraham, her husband, "Why dost thou travel so far from town to town with thy goods when thou canst trade without ever leaving thy tent?" And Abraham did look at her as though she were several saddle bags short of a camel load, but simply said, "How, dear?"

And Dot replied, "I will place drums in all the towns and drums in between to send messages saying what you have for sale, and they will reply telling you who hath the best price. The sale can be made on the drums and delivery made by Uriah's Pony Stable (UPS) or Thackery's Nacker's Transport (TNT)."

Abraham thought long and decided he would let Dot have her way with the drums. And the drums rang out and were an immediate success. Abraham sold all the goods he had at the top price, without ever having to move from his tent.

To prevent neighbouring countries from overhearing what the drums were saying, Dot devised a system that only she and the drummers knew. It was known as Must Send Drum Over Sound (MSDOS), and she also developed a language to transmit ideas and pictures - Hebrew To The People (HTTP).

And the young men did take to Dot Com's trading as doth the greedy horsefly take to camel dung. They were called Nomadic Ecclesiastical Rich Dominican Sybarites, or NERDS.

And lo, the land was so feverish with joy at the new riches and the deafening sound of drums that no one noticed that the real riches were going to that enterprising drum dealer, Brother William of Gates, who bought off every drum maker in the land. Indeed he did insist on drums to be made that would work only with Brother Gates' drumheads and drumsticks.

And Dot did say, "Oh, Abraham, what we have started is being taken over by others." And Abraham looked out over the Bay of Ezekiel, or eBay as it came to be known.

He said, "We need a name that reflects what we are."
And Dot replied, "Young Ambitious Hebrew Owner Operators."
"YAHOO," said Abraham.

And because it was Dot's idea, they named it YAHOO Dot Com. Abraham's cousin, Joshua, being the young Gregarious Energetic Educated Kid (GEEK) that he was, soon started using Dot's drums to locate things around the countryside.

It soon became known as God's Own Official Guide to Locating Everything (GOOGLE). That is how it all began.

And that's the truth..... unbelievable!

'CAPTAIN PENFOLD' - A MINOR PROPHET OF AUSTRALIAN MARITIME AVIATION

In October 1913, at the time of the first RAN fleet entry into Sydney, naval aviation was at a very early and theoretical stage and no aircraft took a formal part in the ceremony. However, the following report did appear in the Sydney Morning Herald's coverage of the Fleet's arrival:

A balloon ascent at Watson's Bay - a beautiful ascent and descent - for a minute or two held the attention of the people, who in their thousands were crowding the foreshores and the boats that lay within the harbour, and perhaps it also interested the crews of the warships, for the balloonist was throwing bombs down from high up in the air to demonstrate its possibilities in war time...

The balloonist was Vincent Patrick Taylor (1874-1930), better known as 'Captain Penfold', a Sydney boy and a member of an industrious and apparently successful family of merchants. His brother, George (1872-1928), another aviation pioneer, worked with Lawrence Hargreaves on his gliding experiments and on 5 December 1905, was probably the first to fly a heavier-than-air, non-powered aircraft in Australia. Four years later, George's wife, Florence Taylor, OBE (1879-1969), an architect and engineer, became the first woman in Australia to emulate this feat, using a glider of her husband's design and build, at Narrabeen.

Rather than fly gliders, Vincent Taylor decided to become a balloonist and parachutist. By 1905, he was already offering an aerial pamphlet delivery service at £5 per 1000 and his clients included many Sydney businesses. He also made well attended display balloon ascents at Randwick, Clontarf, Balmoral and Wonderland City.

At the end of 1906, Taylor signed on as a deck-hand on a ship sailing for San Francisco; his objective was to learn more about ballooning and parachuting from the professionals then working at Oakland. He introduced himself to the resident balloonist as 'Captain Penfold, the Australian parachutist', and worked in San Francisco with Thomas Scott 'Captain Tom' Baldwin, the inventor of the flexible parachute and builder of the first practical dirigible in America. Perhaps significantly, a later student of Captain Tom was General 'Billy' Mitchell, an early air power advocate best known for his bombing demonstrations against obsolete battleships.

Taylor made rapid progress, and it appears likely that during this period he also learned much about the design of both parachutes and balloons and the materials and processes involved in their manufacture. His involvement in ballooning brought him to public notice and, sponsored by the San Francisco Examiner, on 6 May 1908 he made the first of several 'attacks' on the US Navy's Atlantic Fleet (President Theodore Roosevelt's Great White Fleet) as it entered San Francisco.

After launching in his coal-gas filled balloon he climbed through cloud passing over the fleet and then from about 2000 metres parachuted into the Bay. He had to be cut free of his parachute by a boat's crew from USS South Dakota, but on 11 May repeated the feat at night. Ever the showman, the darkness enabled him to use various pyrotechnics and flares to simulate ordnance dropped upon the fleet as he descended.

Taylor returned to Australia in late 1908 and began making parachute descents every Sunday at Clontarf. Hanging precariously from a trapeze, he used an aneroid barometer to determine his altitude and usually jumped from about 1000 metres. He called his new balloon the 'Baldwin War Balloon' and used a red, white and blue parachute of his own manufacture named 'Empire'. Taylor accepted sponsorship from businesses and local government and usually included the Australian flag in his displays. His 'military' stage costume included white pants, a gold braided blue coat and gold braided peaked cap and he wore a curled and waxed moustache.

His success allowed Taylor to establish a factory in Castlereagh Street, Sydney, to manufacture balloons and parachutes. A balloon made of Japara silk cloth weighed some 100 kilograms and cost £45. A parachute cost £14. He took his display to many regional towns in New South Wales and Victoria and appears to have often donated a portion of the takings to charity.

In late 1909, Taylor went into partnership with his brother and established what has been claimed to be the first aeroplane factory in the southern hemisphere. The enterprise opened in Surrey Hills and volunteers began assembling eight 'war kites' and one large aeroplane. The aircraft, named 'Building Australia', was powered by a 30 HP engine made by Gibson & Son, Balmain.

Calling himself 'The Australian Aeronaut', Taylor presumably had the 'Building Australia' in mind when he enquired about an Australian Government competition to develop an aeroplane suitable for military purposes and capable of carrying two persons and 'poising' in the air. No one, however, ever claimed the £5000 prize on offer. Instead, in December 1910, the 'Building Australia' was advertised as an attraction for the first aviation carnival, held at the Royal Agricultural Society Grounds in Sydney. Unfortunately the aeroplane did not fly and Taylor entangled his balloon in overhead wires. The Taylor aeronautical factory does not appear in the records thereafter.

Taylor went to England in 1912 to get his pilot's licence in conventional aircraft, and he graduated from the Bristol School, Salisbury Plains, on 3 December 1912. While in England he fitted in some balloon ascents and parachute descents including a well-publicised 'Santa Claus' jump for a chocolate firm. The company received publicity beyond expectations for this flight, since due to a number of emergencies the flight lasted for two days. The two remaining passengers were eventually rescued, but not before they had ditched their costly movie cameras to prevent the balloon falling into the sea.

On his return, Taylor made what may have been Australia's first BASE jump. To test out an emergency parachute he had designed for airmen and for escaping from high buildings, on 5 June 1914 he jumped from the North Sydney Suspension Bridge linking Cammeray and Northbridge, at a point 50 metres above the mudflats of Middle Harbour. The canopy opened in 30 metres, and Taylor was reported as landing exactly seven seconds after releasing the patent catch by which the canopy was attached to the bridge ironwork. On 30 June 1914 he made a similar jump from a 12 storey building off George Street in Sydney's central business district.

Although over age, in World War I Taylor joined the Australian Imperial Force (AIF), serving as a driver for two years with the 10th Battery, 4th Field Artillery Brigade, Second Division. He apparently applied for flying duties but was rejected due to a lack of available positions. He was hospitalised for a short period after the Battle of the Somme and then returned to Sydney where he was medically discharged in 1917.

The examining doctors found that his disabilities had been caused by his parachuting and ballooning activities before joining the AIF, and so denied him a war service pension.

Taylor returned to civilian parachuting and supported Australia's war effort through recruiting displays in Sydney and around regional Australia.



Vincent Taylor in his floating dry suit. (AusPostalHistory.com)

Until 1918 he jumped as 'Captain Penfold', but reverted to his own name after the war. Returning to the United States in the 1920s, he continued his stunt career, making parachute jumps off bridges over the Niagara Falls River and the Snake River Gorge in Idaho. Taylor also invented and manufactured a floating dry suit very similar to the now superseded Fleet Air Arm 'Goon' suit. He used this to travel down white water rivers, and on at least one occasion simulated a swimmer attack on US Fleet units.

Taylor's views on parachuting are interesting and were best expressed in an interview published in 1928:

Parachuting is poetry of motion. In an airplane, one is being dragged along. In a free balloon, he is pushed by the wind, but in a parachute he is supported and carried down like a babe in its mother's arms.

Time, however, was running out for balloon parachutists and other 'daredevils', as the Great Depression reduced money spent on such spectacles, and powered aircraft attracted greater attention. In 1930, apparently destitute he was hospitalised in the charity ward of a Jacksonville hospital. He died alone aged 56, but was buried with military honours, his casket being draped with the Union Jack and the Florida National Guard providing an escort.



A Bleriot monoplane piloted by Maurice Guillaux, banks over the fleet flagship, HMAS Australia, in July 1914. The RAN provided a standby search and rescue service for Guillaux during his early flights. Maritime aviation progressed rapidly. Less than four years later, Australia would carry two aircraft for fighting and reconnaissance duties and a 4-inch gun for anti-aircraft defence. (RAN)

Although a musical concerning some of Taylor's exploits was performed in Sydney in 1997, there are no known commemorative plaques or memorials. Relegated to the ranks of eccentric showmen, his contribution to Australian aviation has been overshadowed by the achievements of others. This is arguably a grave misjudgement. He was undoubtedly a pioneer, who at great personal risk successfully and routinely demonstrated the edge of what was possible. Taylor was also a fiercely proud Australia and, perhaps above all else, an enthusiast for the development of local aviation.

As a minor prophet of maritime aviation ('minor' because it appears not many took serious notice) Taylor, well in advance of others, highlighted the need for warships to adapt to meet the ever changing threat environment, particularly from the air. Moreover, he pioneered the use of parachutes well before these became an accepted safety system.

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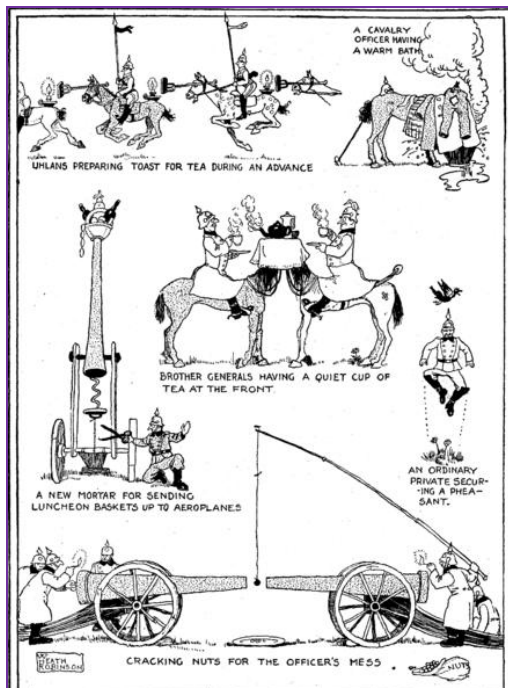
Word Stuff

Have you ever wondered from where the expression 'heath robinson' originated?

(Never mind, read on anyway.)

Used to describe humourous, absurdly complex, makeshift contraptions...*sorry, Heath.*

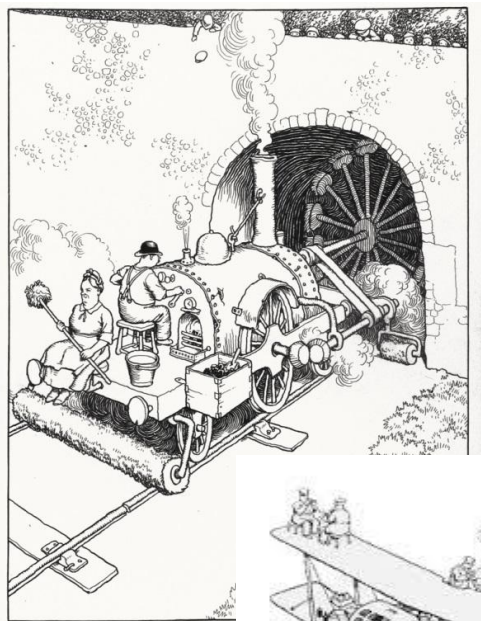
Following its use as Services slang during World War I, the epithet "Heath Robinson" became common parlance to depict complex inventions that that were funny, but not practical or effective. Heath Robinson was an English artist and cartoonist who drew strange, complicated machines that could do simple jobs.



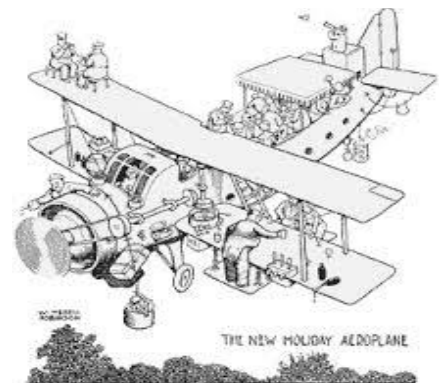
One of the automatic analysis machines built for Bletchley Park during the Second World War to assist in the decryption of German message traffic was named "Heath Robinson" in his honour. It was a direct predecessor to Colossus, the world's first programmable digital electronic computer.

During the Falklands War (1982), British Harrier aircraft lacked a conventional "chaff" dispensing mechanism.

Therefore Royal Navy engineers designed an impromptu delivery system of welding rods, split pins and string which allowed six packets of chaff to be stored in the airbrake well and deployed in flight. Due to its complexity it was often referred to as the "Heath Robinson chaff modification".



AN EARLY TYPE OF ENGINE FOR CLEANING TUNNELS



THE NEW HOLIDAY AEROPLANE

OPERATION RIMAU: THE TRAGIC SEQUEL TO JAYWICK

The 2009 Defence White Paper noted the need for the ADF to maintain a strategic strike capability to carry out 'operations against various strategic and operational military targets'. The ADF has been training for, and conducting, such operations for more than 70 years. A previous issue of Semaphore related one such successful operation, Operation JAYWICK, in which Japanese shipping in Singapore Harbour was successfully attacked in 1943. The sequel to JAYWICK, Operation RIMAU, is an example of how such operations can go tragically wrong.

The success of JAYWICK had emboldened the operation's commanding officer, Major Ivan Lyon, subsequently promoted to Lieutenant Colonel, into planning a larger-scale attack in Singapore. The raiding party would consist of 22 operatives with an additional two performing the duties of 'conducting officers'. They would use 15 one-man, motorised, submersible canoes known as 'Sleeping Beauties' (SBs) to make their attack after which the SBs would be scuttled before making their escape in folding kayaks, known as 'folboats'.

Six JAYWICK veterans formed part of the RIMAU party: Lyon; Lieutenant Commander Donald Davidson, RNVR; Captain Robert Page and three Australian able seamen: Walter Falls, Frederick Marsh and Andrew Huston. The majority of the others were drawn from the 2nd AIF but also included Lieutenant Bruno Reymond, RANR; Sub-Lieutenant Gregor Riggs, RNVR; and Major Reginald Ingleton, RM.

The party departed Fremantle on 11 September 1944 in the submarine HMS Porpoise and arrived at Pulau Merapas on 23 September. The plan was to establish a base on the island with enough provisions to sustain the operatives for three months. Merapas is a tiny island off the east coast of Pulau Bintan and was believed to be uninhabited. A periscope reconnaissance the following day, however, spotted three Malays beside a canoe on the beach and Lyon decided to depart from the original plan; one of the conducting officers, Lieutenant Walter Carey, would remain on the island to guard the supplies.

The rest of the party re-embarked in Porpoise on the evening of 24 September for the next phase of the operation: the capture of a native boat, such as a junk, to sail the operatives towards Singapore. In the afternoon of 28 September, the junk Mustika was sighted off the west coast of Borneo and was boarded by seven of the RIMAU party. Twelve minutes later, Porpoise submerged with both vessels making their way back west. The RIMAU party, the SBs, folboats and other stores were transferred from Porpoise to Mustika on the evenings of 29 and 30 September in the vicinity of Pulau Pejantan.

Once completed, the second conducting officer, Major Walter Chapman and Mustika's Malayan crew returned to Australia in Porpoise. Mustika continued on to Merapas.¹ Porpoise arrived safely back in Fremantle on 11 October 1944 and just four days later Chapman, along with Corporal Ronald Croton, embarked in the submarine HMS Tantalus for the rendezvous with the RIMAU party on 8 November. Tantalus, under the command of Lieutenant Commander Hugh Mackenzie, DSO, RN, was due to conduct an offensive patrol in the South China Sea.²

Mackenzie's orders gave him considerable scope to exercise his own judgement in the execution of the operation. His orders stated explicitly, 'The Commanding Officer HMS Tantalus is responsible for the safety of the submarine which is to be his first consideration and has discretion to cancel or postpone the operation at any time.' His orders further stated, 'Subject to patrol requirements HMS Tantalus will leave her patrol at dark on 7 November and proceed to the vicinity of Merapas Island.' Upon arrival at Merapas, Chapman and Croton were to go ashore on the night of 8/9 November to

make contact with the RIMAU party before re-embarking in Tantalus the following evening. The orders further stated 'In the event of the pickup party and the RIMAU party failing to keep the rendezvous for the embarkation, the greatest caution is to be exercised by Tantalus, who should not hesitate to abandon the operation if contact is not re-established, or if he has some reason to suspect that the operation is compromised.'³

Mackenzie, in consultation with Chapman, decided to remain on patrol and make the rendezvous on the evening of 21/22 November. Tantalus' main objective was offensive action against the Japanese and the orders to the RIMAU party were that they might expect to be picked up at any time within a month of the initial rendezvous date.



A Sleeping Beauty: a motorised submersible canoe similar to those intended to be used on the RIMAU raid

Tantalus arrived at Merapas on 21 November and Chapman and Croton were landed at around 0200 on 22 November. They made their way towards the rendezvous site during the night and at first light began searching for signs of the RIMAU party. What they found was not encouraging.⁴ The evidence suggested that the RIMAU party had been on the island, and had apparently left in some haste.

Chapman and Croton discovered the beginnings of a large lean-to shelter in a clearing at the top of a hill, away from the original base site, with evidence that the party had been there. Empty rations tins were found scattered about; half-cooked food on 'Commando Cookers', fires seemingly kicked out; a few pieces of silver foil; empty cigarette cartons; among other items. Chapman and Croton estimated that the site had been abandoned about two weeks earlier. Upon returning to Tantalus that evening, Chapman and Mackenzie agreed that the operation had likely been a failure and that no purpose could be served in returning to Merapas. Tantalus arrived back in Fremantle on 6 December 1944.⁵



The Malayan junk Mustika; captured for use in Operation RIMAU (NAA: A3269, Q11/58(B))

But what had happened to the RIMAU party? Had the delay in making the rendezvous contributed to their loss? Mackenzie conceded that that was a possibility when he wrote in his report: 'It is to be hoped that the delay in carrying out the operation was not the cause for the loss of this gallant party, but it is, unfortunately, very possible.'⁶ Knowledge of the fate of the RIMAU party is derived primarily from Japanese sources, and many of the sources can, at best, be described as self-serving.

Following the requisitioning of Mustika, the RIMAU party returned to Merapas where three operatives were disembarked to assist Carey before continuing on towards Singapore. On or around 6 October 1944, Mustika was off the west coast of Pulau Batam, and in sight of Singapore Harbour. Whilst waiting for nightfall and preparing to launch the SBs, Mustika was approached by what was thought to be a Japanese patrol boat but was actually a Malayan Police vessel. Although there was, apparently, no order to do so, the operatives opened fire killing around four crew members while at least one escaped. With the element of surprise lost, Lyon decided to abandon the operation and scuttled Mustika and the SBs. The operatives launched their folboats and divided into four groups to

make their way back to Merapas. What ensued was a series of skirmishes with Japanese troops as the operatives island-hopped their way back to Merapas.

At least three of the groups met up again on Pulau Asore, a small island just off Pulau Mapur. There, on 16 October, they encountered a Japanese patrol for the first time. In the subsequent firefight, Lyon and Lieutenant Robert Ross were killed along with eight Japanese troops. The rest of the group escaped but Davidson and Corporal Archie Campbell had apparently been severely injured. Their bodies were discovered by the Japanese following another firefight on Pulau Tapai. On 4 November, four days before the scheduled rendezvous, the Japanese found the operatives on Merapas. Another firefight ensued and there were more losses on both sides; Riggs and Sergeant Colin Cameron were both killed.

For the next few weeks the remaining RIMAU operatives were either captured or died trying to make their escape. Eleven were eventually captured, of which one, Marsh, died in captivity from malaria. The remaining ten were held at Outram Road Gaol and tried before a military court on 3 July 1945. Their Malayan disguises, the use of Japanese identifiers aboard Mustika, and sketches and descriptions of islands and Japanese armaments all worked against them according to the Japanese records of the proceedings, and all ten were sentenced to death.

The sentence was carried out at an execution ground near Passir Panjang on 7 July 1945.⁷ War crimes investigators adjudged that no war crime had been committed as 'By being dressed in non-military attire, these intrepid Australians voluntarily deprived themselves of the right to be treated as prisoners according to the custom and usage of war. Technically, therefore, the Japanese did not commit a war crime and, accordingly, there is no means of bringing them to justice in this particular case.'⁸ In spite of this, many of the Japanese involved in the imprisonment, trial and execution of the ten were convicted of other war crimes.

The 23 members of Operation RIMAU were: Major Reginald Ingleton, Captain Robert Page, Lieutenant Albert Sargent, Lieutenant Walter Carey, Warrant Officer Alfred Warren, Sergeant David Gooley, Corporal Clair Stewart, Corporal Roland Fletcher, Able Seaman Walter Falls, and Lance Corporal John Hardy (all executed); Able Seaman Frederick Marsh (died after capture); Lieutenant Colonel Ivan Lyon, Lieutenant Commander Donald Davidson, Lieutenant Robert Ross, Lieutenant Bruno Reymond, Sub-Lieutenant Gregor Riggs, Warrant Officer Jeffrey Willersdorf, Sergeant Colin Cameron, Able Seaman Andrew Huston, Corporal Archie Campbell, Corporal Colin Craft, Corporal Hugo Pace and Private Douglas Warne (all presumed killed in action).

Petar Djokovic

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¹ *Technical Report on First Sortie of Operation Rimau in H.M. Submarine 'Porpoise'*, Major WW Chapman, 19/12/1944.

² Later Vice Admiral Sir Hugh Mackenzie, KCB, DSO*, DSC, RN.

³ *Report on Attempted Pickup of 'RIMAU' Party by HMS 'TANTALUS'*, Appendix 1, Operation Order No. 44, Major WW Chapman 12/12/1944. File [Lower South China Sea, Singapore -] RIMAU Reports Copy 1, NAA Item Number A3269, E4/C.

⁴ *Special Operations in Australia Vol. II, Part III: Operations in Borneo*, Department of Defence, 1945.

⁵ *Report on Attempted Pickup of 'RIMAU' Party by HMS 'TANTALUS'*, Major WW Chapman 12/12/1944. File [Lower South China Sea, Singapore -] RIMAU Reports Copy 1, NAA Item Number A3269, E4/C.

⁶ Appendix I to Report of Sixth War Patrol of HMS TANTALUS. File [Lower South China Sea, Singapore -] RIMAU Reports Copy 1, NAA Item Number A3269, E4/C.

⁷ *Full Account of Australian Oversea Operation Party*. File War Crimes - Singapore 15 - (Rimau) Execution of 10 Members Lieutenant-Colonel Lyons Party, NAA Item Number MP742/1, 336/1/755.

⁸ Letter from the Minister for the Army, Mr Cyril Chambers MP to Mrs JS Hardy, 27/3/1947. File War Crimes - Singapore 15 - (Rimau) Execution of 10 Members Lieutenant-Colonel Lyons Party, NAA Item Number MP742/1, 336/1/755.

PUNS...ISHMENT

I did a theatrical performance about puns. It was a play on words. *Now, keep that thought.*

I know a guy who's addicted to brake fluid, but he says he can stop any time.

How did Moses make his tea? Hebrewed it.

Broken pencils are pointless.

When chemists die, apparently they barium.

I'm reading a book about anti-gravity. I can't put it down.

This girl said she recognised me from the vegetarian club, but I'd never met herbivore.

They told me I had type-A blood, but it was a Type-O.

I changed my iPod's name to Titanic. It's syncing now.

Jokes about German sausages are the wurst.....*do ya think?*

I stayed up all night to see where the sun went, and then it dawned on me...*something for navigators!*

Did you hear about the cross-eyed teacher who lost her job because she couldn't control her pupils?

What do you call a dinosaur with an extensive vocabulary? A thesaurus.

I dropped out of the Communism class because of lousy Marx.

I got a job at a bakery because I kneaded dough.

Velcro - what a rip off!*When an editor starts printing this sort of crap it's time for him to go!*

Wisdom And Where You Find It!

As I hurtled through space, one thought kept crossing my mind - every part of this rocket was supplied by the lowest bidder.

~ John Glenn

When the white missionaries came to Africa they had the Bible and we had the land. They said 'Let us pray.' We closed our eyes. When we opened them, we had the Bible and they had the land.

~ Desmond Tutu

America is the only country where a significant proportion of the population believes that professional wrestling is real but the moon landing was faked.

~ David Letterman

I'm not a paranoid, deranged millionaire. God dammit, I'm a billionaire.

~ Howard Hughes

After the game, the King and the pawn go into the same box.....*Ed.s favourite.*

~ Italian proverb

Men are like linoleum floors. Lay 'em right and you can walk all over them for thirty years.

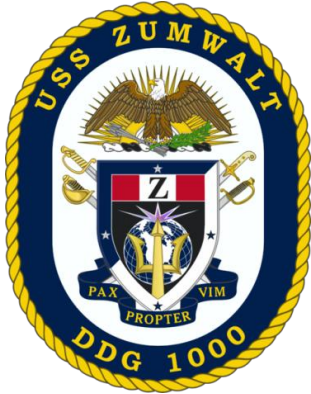
~ Betsy Salkind *Ed. The things women say! And they get away with it!yes, I know that's preposition.*

The only reason they say 'Women and children first' is to test the strength of the lifeboats.

~ Jean Kerr

Yeah! Yeah! I know, I'm going, I'm going!

USS ZUMWALT



Northrop Grumman led the 'gold team', which included Raytheon Systems Company as the systems integrator. It was envisaged that the DDG 1000 would have an all-electric drive with an integrated power system.

The 'gold team' proposal incorporates 'blue team' leader Bath Iron Works (a General Dynamics company) as a subcontractor for design and test activities. Other major subcontractors include Lockheed Martin, BAE Systems Land and Armaments (formerly United Defense) and Boeing.

In November 2005, DD(X) was approved for system development and demonstration (SDD). In April 2006, the USN announced that the first ship of the class will be designated DDG 1000 Zumwalt. The second ship was named as Michael Monsoor (DDG 1001) in October 2008.

The USN budget for the 2007 and 2008 financial year provided funding for the first two ships to be built by General Dynamics Bath Iron Works, and Northrop Grumman Ship Systems, rather than hold a competition, as was previously anticipated. In September 2007 it was decided that Bath Iron Works will build the lead ship.

The US Navy awarded the contract for the construction of the first two ships to General Dynamics (DDG 1000) and Northrop Grumman (DDG 1001) in February 2008.

The construction of DDG 1000 began in February 2009 and that of DDG-1001 began in September 2009. The DDG 1000 was launched in October 2013 and is expected to be delivered by late 2016. The DDG-1001 is expected to be delivered by 2018.

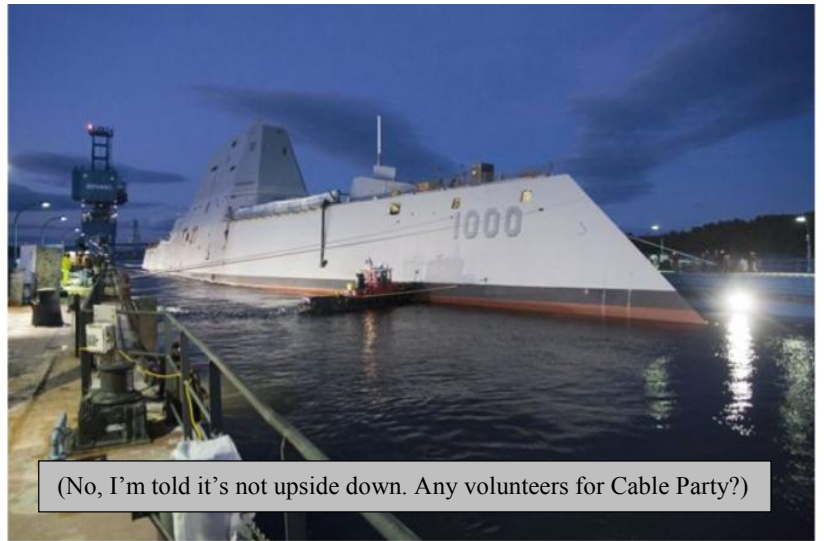
The number of ships required was planned to be between eight and 12 but, in July 2008, the US Navy announced that the DDG 1000 programme would be cancelled after completion of the first two ships. The USN will instead continue with construction of further Arleigh Burke (DDG 51) destroyers.

However, in August 2008, the USN announced it had decided to provide funding for a third Zumwalt Class destroyer. In April 2009, it was announced the DDG-1000 programme would end with the third ship.

In November 2001, the US Department of Defense announced that the DD 21 programme had been revised and would now be known as DD(X). The programme focus would now be on a family of advanced technology surface combatants, rather than a single ship class.

A revised request for proposals was issued and in April 2002, Northrop Grumman Ship Systems, Ingalls was selected as the lead design agent for DD(X). Northrop Grumman led the 'gold team', which included Raytheon Systems Company as the systems integrator.

A revised request for proposals was issued and in April 2002, Northrop Grumman Ship Systems, Ingalls was selected as the lead design agent for DD(X).



(No, I'm told it's not upside down. Any volunteers for Cable Party?)

In August 2009, Temeku Technologies received a contract from the US Navy for the procurement of the flight deck lights (FDL) on a Zumwalt Class destroyer.

In April 2010, Colfax Corporation received a contract from the US Navy to supply SMART technology systems to the first two DDG-1000 Zumwalt Class destroyers.

Recent developments of the Zumwalt programme

The US Navy awarded a task order to CSC in March 2011 to provide engineering and programme support for the DDG 1000 Zumwalt class destroyer.

In February 2011, General Dynamics Bath Iron Works received a contract to provide additional



systems engineering services, which deal with detail design and construction of the Zumwalt (DDG 1000) class destroyer.

In September 2011, General Dynamics Bath Iron Works received a \$1.8bn fixed-price-incentive contract to build DDG 1001 and DDG 1002.

The contract excludes the superstructure of

DDG 1001 which is being built by Northrop Grumman's spun-off shipbuilding arm Huntington-Ingalls Industries.

DDG 1001 is expected to be delivered in December 2015 and DDG 1002 in February 2018.

Northrop Grumman has completed DDG 1000 system design and 11 engineering development models (EDM) and the system-wide critical design review was successfully completed in September 2005. The EDMs include: advanced gun system, integrated power system, composite deckhouse, peripheral vertical launch system, integrated sonar system (with advanced towed array and high-frequency active sonar) and dual band radar suite. A decommissioned Spruance Class destroyer (USS Arthur W Radford) will serve as the test platform for the DDG 1000.

DDG 1000 replaces the DD 21 Zumwalt programme which was for a class of 32 multi-mission destroyers to replace Oliver Hazard Perry Class frigates (FFG 7) and Spruance class destroyers (DD 963) from 2012.

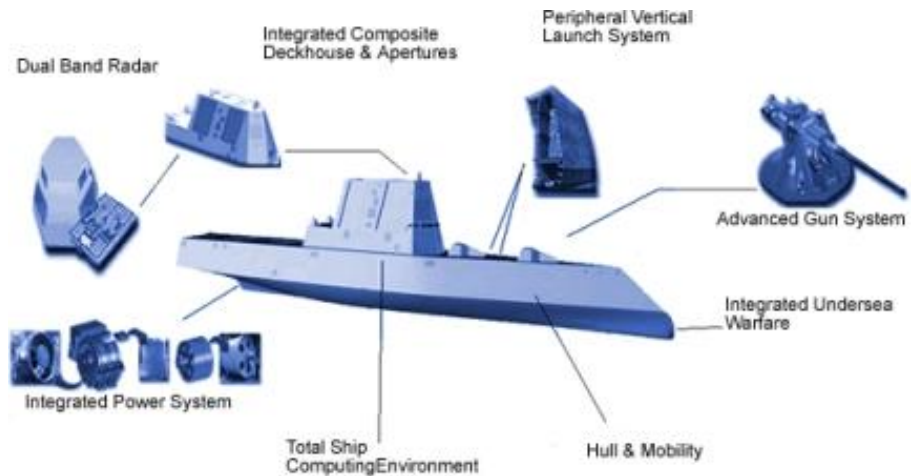
Unlike previous classes of destroyer, which were primarily to counter deep-water threats, the DD 21's primary mission would be to provide land attack support for ground forces and carry out traditional destroyer missions of anti-air, anti-surface and undersea warfare.

In April 2012, DDG 1002 was named as USS Lyndon B. Johnson, after the nation's 36th president.

The USS Lyndon B. Johnson will be the third Zumwalt-class destroyer and delivery is expected in 2018, with construction having started on April 4, 2012.

DDG 1000 Zumwalt Class design

DDG 1000 will have a 'tumblehome' hull form, i.e. a design in which hull slopes inward from above the waterline. This will significantly reduce the radar cross section since such a slope returns a much less defined radar image rather than a more hard-angled hull form.



Requirements for the integrated deckhouse EDM is that it is fully EMC (electromagnetic compatibility) shielded with reduced infrared and radar signatures. Measures to fulfil these conditions include an all-composite superstructure, low signature electronically steered arrays, an integrated multifunction mast and low radar and infrared signatures. Other measures to reduce the vessel's infrared signature include the development of an exhaust suppressor.

Harris Corporation has been awarded a contract for the development of the common data link (CDL) X/Ku-band phased array antenna systems, which will be integrated into the integrated deckhouse assembly. The multi-beam electronically-steered antenna will allow connectivity with up to eight CDL terminals.

The DDG 1000 is planned to have a displacement of around 12,000t, less than the 14,000t or more of the DD-21, with a sustained speed of around 30kt.

Crew onboard the multi-mission destroyer DDG 1000 will have a crew of 142, including the aviation detachment. This represented major theoretical cost saving compared to crew levels of 330 on Spruance destroyers and 200 on Oliver Hazard Perry frigates.



In November 2007, Raytheon IDS was awarded the contract as the prime mission systems integrator for all electronic and combat systems. Raytheon delivered the first electronic modular enclosure (EME) for the Zumwalt Class destroyer (DDG 1000) in May 2010.

The combat system will be based on the total ship computing environment (TSCE) utilising open architecture, standardised software and commercial-off-

the-shelf (COTS) hardware. Raytheon delivered more than six million lines of software for the DDG 1000 Zumwalt-class destroyer programme in January 2013. General Dynamics is responsible for the common enterprise display system (CEDS).

DDG1000 weaponry DDG 1000 will have a sensor and weapons suite optimised for littoral warfare and for network-centric warfare. Northrop Grumman has put forward a solution based on a peripheral vertical launch system (PVLS). The solution consists of 20 four-cell PVLS situated round the perimeter of the deck, rather than the usual centrally located VLS. This would reduce the ship's vulnerability to a single hit.

The advanced vertical launch system (AVLS) that forms the basis of the PVLS is being developed by BAE Systems Land and Armaments and Raytheon and has been designated the Mk57 VLS.

Missile systems under consideration include tactical tomahawk (intended to succeed Tomahawk TLAM), standard missile SM-3 and the evolved Sea Sparrow missile (ESSM) for air defence.

BAE Systems Land and Armaments has been awarded the contract to develop the EDM for the ship's advanced gun system (AGS), building on development work carried out for DD-21.

It will be equipped with a fully automated weapon handling and storage system and a family of advanced munitions and propelling charges, including the GPS-guided long-range land attack projectile (LRLAP). Up to 900 rounds of LRAP ammunition will be carried.

Lockheed Martin has been awarded the contract for the LRAP EDM.

The family of munitions is expected to include land attack and ballistic projectiles. Technologies derived from the US Navy's extended-range guided munition (ERGM), the US Army 155mm XM-982 projectiles and the DTRA 5in projectile are being studied for incorporation into the projectile suite.

BAE Systems Land and Armaments is developing advanced gun barrel technologies for the new AGS, with improvements to barrel life, overall system performance and life-cycle costs.

The ship's close-in gun system (CIGS) will be the BAE Systems Land and Armaments 57mm mk110 naval gun. The gun has a firing rate of 220 rounds a minute and range of 14km (nine miles). Raytheon IDS is supplying the ship's electro-optical / infrared suite which has five Lockheed Martin sensors and will provide 360° surveillance and gun fire control.

Radar and sonar aboard the Zumwalt Class destroyer

The radar suite will consist of a dual-band radar for horizon and volume search - a Lockheed Martin S-band volume search radar (VSR) integrated with the AN/SPY-3 multifunction radar already being developed by Raytheon for the US Navy. The two radars are to be integrated at waveform level for enhanced surveillance and tracking capability.

The AN/SPY-3 multifunction radar (MFR) is an X-band active phased-array radar designed to detect low-observable anti-ship cruise missiles and support fire-control illumination for the ESSM and standard missiles.

The ship's Raytheon AN/SQQ-90 integrated undersea warfare system includes AN/SQS-60 hull-mounted mid frequency sonar, AN/SQS-61 hull-mounted high-frequency sonar and AN/SQR-20 multifunction towed array sonar and handling system. The DDG 1000 ship design includes two landing spots for helicopters.

Zumwalt Class propulsion system

It was envisaged that the DDG 1000 would have an all-electric drive with an integrated power system, (IPS) based on in-hull permanent magnet-synchronous motors (PMMs). The provision of electric drive eliminates the need for drive shaft and reduction gears and brings benefits in acoustic signature reduction, an increase in available power for weapon systems and improvements in the quality of life for crew.

DRS Technologies power technology unit received development contracts for the PMM motors, electric drive and control system for the IPS.

However in September 2007, Converteam (formerly Alsthom Power Conversion) was awarded the contract for the IPS with a solution based on advanced induction motors (AIM). In August 2009 Converteam received another contract from the US Navy to supply long-lead materials for Zumwalt Class destroyer DDG-1000 under the high-voltage power subsystem (HVPS) project.

The Rolls-Royce MT30 36MW gas turbine generator set has been selected to power the IPS EDM. Rolls-Royce delivered the first set in February 2005. Rolls-Royce was awarded a contract for four MT30 sets for the first two DDG-1000 destroyers in March 2007.

The MT30 has 80% commonality with the Rolls-Royce Trent 800 aero engine and Rolls-Royce states that it is the most powerful marine gas turbine in the world. CAE will supply the integrated platform management system.

Frequently Asked Questions About NWOA

About Us

The Naval Warfare Officers' Association is a social network for past and present Warfare Officers of the Royal Australian Navy. Our purpose is to continue the patriotism, loyalty, friendships and comradeship of Naval Service within the wider community. Further information can be found at our website <http://warfareofficers.org.au/>. If you don't have Internet access please contact Membership Secretary and he will arrange to have your details loaded to the website database.

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The NWOA welcomes those officers qualified in a recognised Naval Warfare course and others who, by reason of their close association with, or interest in, the objects of this Association, the Committee deem to be desirable to be members.

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2. Click the 'Join' tab on the Home page (hidden in the top RH corner) and click on the "JoinUs" tab where you can enter your Name, Email address, Password and About Yourself (show brief details of your warfare course or other reasons for joining NWOA). Click 'Request Membership'.
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5. Having clicked the gearwheel icon enter/edit the following personal details: Name, Rank, Post Nominals and List eg. DSC RANR (Rtd), Email, Password, Phone No., Mobile, Address details, whether you wish to receive "Engage" by Email, Career details (optional)
6. Click 'Update User'.

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HMAS Watson
NSW 2030

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Membership Secretary – Leut Ross Clarke at: ross.clarke1@defence.gov.au

Please ensure your mail/email contact details are current!!!

The Quiz !

- 1) Who wrote “The Magic Pudding”?
- 2) In the Australian Senate, how many senators represent each state, and each territory?
- 3) What was the yearly production of milk by an average Australian (Victorian) dairy cow in 2012?
 - a. 520 litres,
 - b. 2012 litres,
 - c. 4024 litres, or
 - d. 6054 litres.
- 4) What is a ‘mulct’?
- 5) Which was the first bank established in Australia? Yes, which bank? *Careful.*
- 6) Name the three words beginning with ‘g’ in the first verse of Advance Australia Fair?
- 7) What are the generic Naval nicknames for the following surnames:
 - a. Bell, b. Martin, c. Moore, d. Payne, e. Ward, f. White, g. Wright?
- 8) While we are on the subject of nicknamesWhat is a nipper? *Steady, now!*
- 9) What is the state of a vessel if it is ‘neaped’?
- 10) What does it mean to ‘swallow the anchor’?

Answers

1. Norman Lindsay.
2. 12 per state, 2 per territory.
3. 6054. Udderly amazing!
4. A fine imposed as punishment.
5. Bank of New South Wales.
6. Golden, gifts, gift..
7. a. Dinger, or Daisy; b. Pincher; c. Pony; d. Wacker; e. Sharkey; f. Knocker; g. Shiner.
8. A stopper, or strop, used to hold two ropes together temporarily.
9. Can depart harbour only on a spring tide.
10. To retire from sea service.....or from editing Navy newsletters.

**You know that tingly
little feeling you get
when you like someone?**

**That's common sense
leaving your body.**

SUBSCRIPTIONS, ORDER FORM & ANZAC DAY REUNION ACCEPTANCE

Subscriptions are due 31 March unless you have paid for years in advance. To check your membership status you need to Login to our website. See "*Frequently Asked Questions about NWOA*" which is enclosed. If you do not have Internet access then contact Membership Secretary: LEUT Ross Clarke, at the address below or 02 9337 0648..

Members with WW II service are not required to pay but Membership Secretary needs to know so that he doesn't hound you for unpaid subs. Drop him a line or send an e-mail.

ANNUAL SUBSCRIPTION for 2013/2014		
One Year	\$30	
3 Years	\$84	
5 Years	\$130	
(A free lapel badge comes with each 5 year subscription)		

I wish to attend the AGM and Reunion aboard Radar and will be bringing ____ guests whose names are given below. Cost per head is \$70.		
I also wish to order the following items to be mailed to me at the undernoted address:		
	Warfare Officer Lapel Badge @ \$5	\$
...	Association Tie(s) @ \$25 each (including postage)	\$
...	Hard cover copies of CONTACT @ \$25 each (plus packing and postage \$6.50)	\$
...	Soft cover copies of CONTACT @ \$12.50 each (plus packing and postage \$6.50)	\$
		TOTAL
		\$
<p>Either pay by cheque and mail to: LEUT Ross Clake RAN School of Maritime Warfare HMAS Watson NSW 2030</p> <p>Or pay on-line. Westpac BSB 032 000 Account 100155. Include your name and details of the transaction with the funds transfer and <u>please send details by email</u> to Membership Secretary: ross.clarke1@defence.gov.au</p> <p>ALLOW A FULL WEEK FOR CHEQUE CLEARANCE OR ELECTRONIC BANK TRANSFER</p>		

	Member Details	Name of Guest(s)
Name of Member		1
Address		2
		3
		4
		5
		6
Signature		7
Date		8



Naval Warfare Officers' Association

ANZAC DAY 2014

THE MARCH	
MUSTER:	0845 (Banner bearers by 0830, please)
ASSEMBLY POINT:	Castlereagh Street; between King and Market Streets
PLACE IN MARCH:	After HMAS SYDNEY Ahead of VENDETTA and VAMPIRE

REUNION ABOARD “Proclaim” (RADAR is in refit)	
BOARD:	At Royal Sydney Yacht Squadron at 1030, or At Commissioner’s Steps, West Circular Quay at 11:00 to 11:15
DISSEMBARK:	At Commissioner’s Steps, West Circular Quay at 14:30 or At Royal Sydney Yacht Squadron at 15:00.

ANNUAL GENERAL MEETING
NOTICE is hereby given that the Sixty Seventh Annual General Meeting of the Association will be held aboard the ferry <i>Proclaim</i> on ANZAC Day at 12:00.
In our usual brief and informal meeting, business will include the presentation of reports and the election of office bearers and committee members.

ANNUAL SUBSCRIPTIONS
Our financial year ends on 31 March and annual subscriptions for 2014/15 are due for payment- unless you have paid in advance. Check your membership status on our Website.
Members are requested to complete and return the enclosed Subscription and Order Form, together with appropriate payment (or payment can be made on-line). This form makes provision to order copies of CONTACT and the Association tie and to nominate your guests.

CMDR David Flakelar
Hon Secretary