Today
Tomorrow

MPA

Why the ADF needs Surface Combatants

Battle of the River Plate

Australia's Leading Naval Magazine Since 1938
South Africa’s new Meko A200 corvette at sea and on her way to South Africa to be fitted out before her expected commission in August 2004. The new stealth ship is one of three which will be armed with eight MM-40 Block II 3 rocket anti-ship missiles, an indigenous VLS with 16 cells for the South African Linkhorn anti-ship missile, 30mm super rapid gun, torpedoes, a 35mm gun and a Super Lynx helicopter (Blohm+Voss).
THE NAVY

Volume 66 No. 1

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Front cover: An Evolved Sea Sparrow Missile (ESSM) leaves the
MK-41 Vertical Launch System (VLS) of the RAN Anzac class frigate
HMAS WARRAMUNGA. See news section 'Flash Traffic' for more
details. (RAN)

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THE EXAMINERS HANDS IN THEIR REPORTS

Three of the four significant inquiries concerning security and economic policies ended in the second half of 2003, the reports receiving varying degrees of public attention: in order of publication they were:

- The Defence Procurement Review 2003 - better known as the Kinnaird Review, named after the chairman of the reviewing team. Submitted in August.
- The Defence Capability Review. Decisions announced in November.

The findings and recommendations of the fourth enquiry, that of the Defence Sub-committee of Parliament’s joint Standing Committee on Foreign Affairs, Defence & Trade, into Australia’s maritime strategy, was not available in mid-November when this article was compiled; this might be thought surprising as the policy has been a major factor in defence capability for many years.

The Kinnaird Review, commissioned by the Government in late 2002 to examine defence procurement arrangements, not only criticised existing acquisition arrangements but also queried the adequacy of advice given to the Government concerning capability assessments and requirements. The recommendations of the Review, largely accepted by the Government, would seem to have an important bearing on the realisation of the acquisition objectives of the Government contained in the capability review (further comments on the Kinnaird Review may be found in "Observations").

The Independent Review of Australian Shipping (IRAS) was commissioned by the Government's Australian Shipowners Association about 12 months ago and carried out by Messrs. Peter Morris and John Sharp, former Transport Ministers in Labor and Coalition ministries respectively. Their report stressed the need for the industry to be independent of "Government largesse" but at the same time pointed out the need for Government support, not least in the form of relief from repressive laws and regulations.

Defence Capability Review: The latest review fulfils the Government's intention to review annually the capability proposals contained in the defence policy White Paper Defence 2000. In that document the Government recognised the importance of long-term planning if ever the Australian Defence Force was to attain the desired level of capability. It is to the Government's credit that despite all manner of distractions, in two annual reviews it has confirmed the basic capability plans outlined in Defence 2000.

So far as the Navy is concerned its people have reason to be pleased. There are no major "suck" in equipment planning and the announced intention to retire two FFGs from 2006 is reasonable when it is considered that only the second FFG’s, ADELAIDE and CANBERRA, were launched (in Seattle USA) in 1978 and have been worked hard by the RAN. Two of the six coastal mine hunters will also be laid up, presumably as part of the plan to overcome personnel shortages.

The Government has said it would prefer the planned three air warfare destroyers and two amphibious ships to be built in Australia rather than purchased overseas. While the dimensions of the new ships are unknown (or have not been published) the equipment to be fitted to the destroyers and the purpose of the amphibious ships indicates fairly large vessels: this may cause some problems as Australia has not built large ships for many years and building yards would almost certainly need extensions, e.g. shipways. Also, some of the Kinnaird recommendations could be applied and options such as off the shelf acquisition considered. These are not insurmountable problems and it would undoubtedly be in the country’s long-term interests to maintain the shipbuilding industry.

Geoffrey Evans

BACK ISSUES

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Vol. 66 No. 1

THE NAVY
Collins class such as faulty valves, which must have an unsettling affect on those who man these submarines.

With the commissioning of HMAS RANKIN in March last year, the first phase of the COLLINS class project comes to a close, with the next phase of refits and upgrades designed to keep the submarines in service for the next twenty to thirty years. However, the submarine fleet is not expected to be fully operational until 2006, when all submarines would have been through the ‘Fast Track’ process, with faults corrected and a new fire control system installed.

FUTURE PLANS

While construction of the Collins class has ended the RAN should begin long term planning for their replacements. Although the submarines are not due to start decommissioning till 2026, the RAN could begin to plan a replacement class in order to ensure the mistakes of the Collins program never happen again. The skills of the Submarine Corporation workforce that have been developed over the course of the past 14 years of this project must not be lost given the time and money that has been spent on the Collins class.

DESTROYERS

With the decommissioning of the last DDG, HMAS BRISBANE in 2002, the RAN lost a command and control platform as well as a major anti-air and naval gunfire support ship. The failure to acquire the four ex-USN Kidd class destroyers as replacements for the DDGs could be a lesson from the Collins class. It is said that the USN was approached about the possibility of acquiring some of the first five Ticonderoga’s and that they agreed to supply them if the RAN asked.

The current DCR reiterated the RAN’s plans for three new build air-warfare destroyers, announced in the Defence White Paper of 2000, built in Australia and with a US Aegis combat system. The commissioning of the Collins class frigates has obscured the need for these new ships, as the Collins class frigates are not expected to have a significant capability boost.

FUTURE PLANS

While no replacement program on a one for one basis existed for the DDGs, Project SEA 4000 is understood to provide a new air warfare destroyer capability for the RAN. A call for tenders is expected soon for three new ships however, with the RAN needing to replace its amphibious fleet sooner rather than later it is unknown when the air-warfare destroyer might come into service given this competing demand.

FRIGATES

The RAN’s six Adelaide class frigates (USN Oliver Hazard Perry class) were originally designed for the USN as cheap and expendable surface ships for use as convoy escorts if the ‘Cold War’ became ‘hot’. They were designed for both anti-air and anti-submarine warfare and are armed with a Standard SM-1 Surface to Air Missiles, Harpoon Anti-Ship Missiles, a 76mm gun, two sets of triple torpedo tubes for Mk-46 ASW torpedoes, a Mk-15 Block 1 Phalanx CIWS (Close In Weapon System) and two S-70B2 Seahawk helicopters for ASW and ASUW tasks.

The three remaining ships, BALLARAT, TOOWOOMBA and PERTH, are expected to be in service by 2006, with the eight ships of the class becoming the mainstay of the fleet.

FUTURE PLANS

The Anzac class are about to undergo a warfighting improvement program. This program will entail the fitting of a second fire control channel to guide the ESSM, Harpoon ASMs, a torpedo defence system and a second type of anti-air missile, thought to be the French made Mistral II for ASM defence and as a second anti-aircraft defensive layer. They will not be fitted with the Phalanx CIWS as current thinking dictates that the ESSM and the second anti-air missile will be enough to defend the ships from modern ASMs.

PATROL BOATS

The Fremantle class patrol boats are approaching the end of their useful and economic service life. The Fremantle class are armed with a 40mm Bofors gun and two 50-cal machine guns. The ‘f’ element has proven to be valuable.

The introduction into service of the RAN’s first five Anzac class frigates (ANZAC, ARUNTA, WARRAMUNGA, STUART and PARRAMATTA) has been on time and on budget. These are the first RAN ships to be equipped with the Mk-41 VLS for the ESSM. They also carry a 127mm (5 inch) gun, two triple Mk-32 torpedo tubes for Mk-46 ASW torpedoes, four .50-cal machine guns and a Seaspray/Super Seasprite helicopter, with the Seasprite having the IR guided AGM-119 Penguin anti-ship missile. They are also fitted with the Australian designed Nulka hovering rocket which employs an electronic warfare payload to seduce ASMs away from the ship.

While the class are understood by many to be ‘fitted for but not with’, the reality is that ‘space and weight’ have been provided for only.

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THE NAVY

The Fremantle class patrol boat HMAS CESSNOCK. The Fremantle class have given the RAN a great capability over its lives. They are about to be replaced with the new Armidale class to be built in WA. (RAN)
and reliable units for the RAN. Most of the class are based in the North in an effort to stop illegal fishing and people smuggling with many of the patrol boats spending up to 7-8 months at sea.

**FUTURE PLANS**

The replacements for the Fremantles, known as the Armidale class, will be built in Australia by Austal Ships, based in Western Australia. These patrol boats will be the front line of the RAN in Northern Australia as they continue the outstanding work of the Fremantle class.

The new aluminium boats will operate out of Cairns and Darwin and will be armed with an Israeli Rafael 25mm Typhoon stabilised automatic cannon and equipped with state-of-the-art communications systems. They will be able to operate in greater range of sea conditions and will improve Navy’s capability to intercept and apprehend vessels suspected of illegal fishing, quarantine, customs or immigration offenses.

The fleet of 12 new patrol boats will also carry two smaller sea boats to allow crews to conduct boarding and surveillance missions, with greater flexibility, reliability and security.

Navy will be able to operate the new Armidale class boats for a combined total of 3,000 days per year, plus have the capacity of an additional 600 days for short notice tasks. This compares to an average 2,300 operational days per year currently undertaken by the existing Fremantle boats.

The boats will have a range of 3,000 nautical miles, a 25 percent increase over the Fremantles. Being some 14.8m longer than the Fremantles, and fitted with an active ride control system including fin stabilisers and trim tabs, the new patrol boats will be able to operate in a greater range of sea conditions, further improving their use at sea. They will have a capacity to carry up to 20 extra people in additional accommodation, whereas the Fremantles have no dedicated additional accommodation.

However, it should be stressed that like the Fremantles, the Armidale’s warfighting role is limited at best.

**MINE HUNTERS**

The Huon class minehunter program that has delivered six new minehunters to the RAN has been problem free, on time and on budget. Based on an Italian design the six ships of the class are among the best in the world. Fitted with the most advanced minehunting equipment the Huon class are a major asset to the RAN and will be for some time to come.

However, there are two questions surrounding the minehunter capability. Does the RAN have enough of these ships, and should at least two of the Huon class be based in the West. The answer is probably no, and in the second, yes. In the age of Asymmetric warfare, harbours such as Weipa, Port Hedland, and Dampier are all targets for those who have the capability and experience to lay mines. If just one port was targeted it may take many mine-hunting ship and clearance diving team in the RAN to both sanitise and to check the approaches to the affected port. If Port Hedland or Dampier were affected it will take weeks for a minehunter to arrive on site from Sydney, where a HMAS STIRLING based ship can be in position inside of three days.

The Minehunters can also provide an effective ‘backup’ for the patrol boats as seen in the current operation in the Solomon’s with HMAS HUON conducting very successful patrol and SAR (Search And Rescue) duties.

The recent DCR actually announced the laying-up of two unnamed Huon class minehunters as a cost and personnel saving measure.

**AMPHIBIOUS WARFARE SHIPS**

The nine ships of the RAN’s amphibious squadron are busier now than over the past 30 years. The heavy landing ship HMAS TOBRUK is nearing the end of her service life. A reliable ship, TOBRUK, is the heavy lift backbone of the amphibious squadron and without an appropriate replacement the Army’s ability to deploy vehicles and armour over the beach will be limited.

The two LPAs, KANIMBLA and MANOORA, have been used extensively since mid 2000. The question as to whether these two ships were worth the wait and the negative media coverage has been answered with a resounding yes. From the Pacific to the Persian Gulf, these modified Newport class tank landing ships have been hailed as vital assets for their load carrying capacity, aviation support facilities, hospital and their considerable Command, Control and Communications facilities, something the RAN has been lacking since the decommissioning of HMAS MELBOURNE (R-21) in 1982. Both ships are to get new landing craft (to be built by ADI Newcastle).

The replenishment ship HMAS SUCCESS is nearing the end of her service life. A reliable ship, SUCCESS is the heavy lift backbone of the amphibious squadron and without an appropriate replacement the Army’s ability to deploy vehicles and armour over the beach will be limited.

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**SURVEY VESSELS**

The RAN’s fleet of survey ships is relatively new, with the oldest ship less than 10 years old. The survey ships are based in Cairns and use the most advanced hydrographic tools available. They have had some success recently with charting a new course through the Great Barrier Reef for large ships. This should save shipping companies millions of dollars, which should hopefully be passed onto the consumer. However, the two largest ships, LEEUWIN and MELVILLE, recently swapped their usual all white colour for RAN grey in order to take up some of the strain of Operation Relex duties. Relex is the operation to patrol and intercept suspected illegal entry vessels known as SIEVs. The fact that these ships have been turned into warships and pressed into operational service is an indication of how the Federal Government’s policy towards People Smuggling is wearing out the Navy.

**REPLENISHMENT SHIPS**

The RAN currently has two replenishment ships, HMAS SUCCESS, which is 16 years old, and HMAS WESTRALIA, which is over 40 years old. Both ships need to be replaced.

The replenishment ship HMAS SUCCESS in Dili Harbour. While not being compliant with new airspace regulations calling for double hulls for ships that carry fuel or oil, she can be made compliant for a modest cost (RAN).

New international laws pertaining to oil and fuel carrying ships, such as the RAN’s two replenishment ships, will mean that neither ship will be compliant. The new laws, ratified by Australia, call for all fuel/oil carrying ships to have a double hull to contain oil spills in case of collision or grounding.

**FUTURE PLANS**

The recent DCR announced the decommissioning of WESTRALIA and replacement by 2006. Her replacement is understood to be a standard double hull fuel oil merchant ship refitted and modified for use as an at sea replenishment vessel. SUCCESS can be modified for a modest price to make her compliant with the new laws but nothing has been heard on this subject as yet.

**FLEET AIR ARM**

The RAN Fleet Air Arm (FAA) has had a rethirt after the scrapping of the fixed wing elements in 1983. The MK-50A Sea King and S-70 Seahawk helicopters currently form the backbone of the FAA and are being used extensively from the Persian Gulf to the Solomon’s.

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**REPLENISHMENT SHIPS**

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They should also form part of the early replacement for the common airframe which will also be common to the Army's Seasprite, Seahawk and Sea King can be replaced with an attack helicopter to around three to four. It is hoped that the number of different types of helicopters it uses. The plan is for a general utility transport. The ADF is currently undergoing a study to try and reduce problems continue with the SH-2G As Super Seasprite which has delayed their introduction into service. At present the Seasprites are not expected into service until 2005, at least three years behind schedule. Although, the first Seasprite has recently been provisionally accepted into service and started shipboard trials aboard HMAS WARRAMUNGA.

The other helicopter type used by the RAN is the French built Squirrel. Its roles consist of pilot training, SAR and shipboard trials aboard HMAS WARRAMUNGA. Recently been provisionally accepted into service and started trials and will he a valuable addition to the fleet's standoff anti-shipping capability. (RAN)

In Afghanistan, MPA's were called upon to act as communication nodes for Allied forces in that country's difficult terrain, a role reprinted in Operation Enduring Freedom where their ability to operate for 8 to 12 hours without requiring air to air refuelling was highly prized.

The Maritime Patrol Aircraft (MPA) was for many years considered the quintessential symbol of the cold war however, its role is changing and the aircraft's capabilities with it. The thought of an MPA being able to assist in a Special Forces war in a land locked country was, up until 18 months ago ludicrous. But this did happen in Operation Enduring Freedom in Afghanistan. George Kaplan takes a look at the world's MPAs and their future.

The war on terror, as well as the mission to the Solomon Islands and Operation Relent, has increased the operation tempo of the RAN. This has both good and bad points. One of the good points is that the tempo of operations is giving much needed experience to younger sailors of what can be expected in the future. The bad point is that supplementary funding for this increased tempo has not been forthcoming thus having a detrimental effect on replacement programs. Ships are also being worked harder than budgeted for with maintenance schedules and refits suffering.

Despite Navy's efforts in drafting Plan Blue the DCR has changed some aspects. Meaning Navy will have to go back to the drawing board and re-do Plan Blue.

CONCLUSION

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Since the original P-3A took flight in 1961 and continuing through the P-3B and P-3C models, the design has been operated by a dozen nations, with Australia, Norway and New Zealand early operators. License production of 110 aircraft was undertaken in Japan for the Japanese Air Self Defence Force, while a generally similar aircraft was operated by Canada as the CP-140 Aurora.

The last new build unit, a P-3C model, was delivered to South Korea in 1995. However most of the types' operators have undertaken a series of updates and upgrade programs to keep the Orion flying. For example the Royal New Zealand Air Force undertook a re-wiring of their small fleet of six P-3K aircraft to ensure their continued operation. The Royal Australian Air Force has undertaken a major upgrade of the electronics of year Orion fleet, resulting in the new designation AP-3C.

With the fleet of US Navy Orion's declining, several countries have acquired surplus aircraft, with India reportedly interested in acquiring a number of Orions to replace its aging IL-38 May aircraft. This would result in the Orion operating opposite sides of the continuing India – Pakistan tensions.

The Lockheed S-3 Viking was a carrier borne anti-submarine and maritime patrol aircraft designed to package much of the Orion's electronics and capabilities into an aircraft capable of operating from the US Navy's aircraft carriers. First flight of the twintail powered Viking took place in 1972, with the Viking entering service in 1974.

Over the next quarter century numerous upgrades to electronics and other equipment were undertaken, as well as the conversion of some aircraft to electronic warfare roles. However the decision was taken in 1990 to phase out the Viking in the MPA/anti-submarine/EW roles.

THE RUSSIAN BEAR

The Tupolev Tu-95 Bear reversed the more usual progression from civilian airline to military derivative - the Tu-95 preceded the civilian Tu-114 by several years, entering service in 1956. Given the NATO code name Bear, this massive aircraft incorporated a series of contradictions: it was powered by four massive contra-rotating turboprop engines, but incorporated swept wings, despite conventional science stating that swept wings only become effective at speeds sustained by propeller driven aircraft. Despite this the Bear has proven to be a particularly effective aircraft, with derivatives operating as bombers, electronic warfare aircraft, airborne command posts and cruise missile carriers.

The maritime patrol variant, designated Tu-142, is operated by both Russia and India, with the Russian Navy upgrading the Bear's electronics and armament under a project dubbed Sea Dragon.

THE SOUTH AFRICAN ELEPHANT

The South African Air Force (SAAF) has the only maritime patrol variant of the Tu-95 in service. The Tu-95MS entered service with the SAAF in 1974, replacing the ageing S-5L Omega. As part of the programme the aircraft underwent a major electronic upgrade and were fitted with new conformal fuel tanks, which increased the patrol range to over 6,000 nautical miles. The South African version is known as the S-5MS.

Some of the remaining aircraft were refined to land-attack and tanker roles. More recently there has been suggestions made that the stored S-3 fleet may be converted to water dropper fire bombers if no foreign buyer shows interest in acquiring the Vikings.

THE MULTI-MISSION MARITIME AIRCRAFT

The majority of the popular maritime patrol aircraft we have examined initially entered service in the 1950s or early 1960s, the exception being the Atlantic 2 which is now some 15 years old. While all have had numerous electronic and structural upgrades to allow them to continue into service, none are still in production, and each aircraft lost to mishap or fatigue results in the permanent reduction of the available fleet.

While the Russian air program plans exist for replacement aircraft the only serious options currently being offered are by the US manufacturers.

Two manufacturers are vying to fill the United States Navy's Multi-mission Maritime Aircraft requirement for a P-3 replacement. Due to the size of the USN requirement, the winner of this competition will automatically be catapulted into the position of favourite for other Orion replacement programs worldwide.

Lockheed Martin, who can lay claim to the most successful aircraft of the last four decades, the P-3 Orion, have proposed opening a new production line for their MPA derivative, the P-3C, incorporating the latest technologies in materials, power plants, electronics and production methods. The proposed new aircraft bears a striking resemblance to today's P-3C, the most notable difference being the six bladed propellers of the new aircraft's turboprop engines, the same engines fitted to Lockheed Martin's new C-130J Hercules.

Despite a close resemblance to the original Orion, Lockheed Martin are emphatic that their proposal is a combination of cutting edge technology, mated with a tried and tested design, one which will utilise the latest of today's construction materials and techniques to offer unparalleled improvements in reliability, survivability and capability over the Orion it would replace.

Lockheed Martin emphasises that it is building on the strength of 40 years of MPA experience, and that the Orion is the standard maritime patrol aircraft for the western world, with hundreds still in service, and its proven expertise makes it the logical source for an Orion replacement.

Perhaps the main weakness in Lockheed Martin's proposal is that the Orion 21 indeed looks so similar to the Orion that it is intended to replace, leading to its opponent suggesting that it is offering a warmed over Orion to meet a new centuries challenges, a claim Lockheed Martin strenuously deny.

The alternative to the Orion 21 comes from a company not previously associated with maritime patrol aircraft. Boeing. Better known for the thousands of its airliners in service across the globe, and for the range of McDonnell Douglas fighter aircraft it now produces under its name following the acquisition of that company. Boeing has thrown its hat into the ring with a design based on its best selling 737 airliner.

The Boeing MPA is based on the 737-700 passenger aircraft. The original 737-100 aircraft flew in 1967, and was followed by the similar 737-300. In 1981 Boeing announced that it was developing a larger and more advanced version of the original 737 family, which would incorporate new engines. The resulting aircraft, the 737-700 and its derivatives, the larger 737-800 and smaller 737-500 went on to serve in airlines around the world, with some 2000 examples sold.

Building on that success, Boeing launched the 737 New Generation series, the smaller 737-600, mid-sized 737-700...
and the larger 737-800 and 737-900. These aircraft incorporated substantial improvements in aerodynamics, engines and avionics, resulting in substantial improvements over the older “Classic” series of 737 aircraft, leading to sales of more than 1,200 aircraft, with the production line still in operation.

Boeing is hoping to build on that legacy of reliability and worldwide network of operators and maintenance expertise by adapting the 737-800 to a new role as a Maritime Patrol Aircraft.

Boeing claims a long and successful track record of modifying commercial aircraft for military use, with the 707, 737, 747 and 767 all having been modified into a range of roles including Airborne Early Warning, air to air refuelling tanker, airborne command post, ground surveillance, electronic warfare aircraft and VIP transport amongst others.

Critics of the Boeing proposal point out that the company has never had to fit a weapon station to the wings and a bomb bay to the fuselage of an airliner before, nor operate a modified airliner in the harsh environment of low-level flight in the salt laden air of the world’s oceans.

Boeing responds that it has extensive experience in the maritime environment, through its F/A-18 Hornet program for the United States Navy, and that the 767 began life as an airliner as well.

In addition, Boeing points out that the 737-800 derivative enjoys a 100-knot speed advantage and a 3.5 kilometre electronic warfare aircraft and VIP transport amongst others.

The largest and perhaps best known of the UAV’s currently grown over the years, as has the number of nations operating these large and versatile aircraft, the number of possible replacements has dwindled to only two serious contenders, with whomever wins the MMA competition seemingly assured of the lion’s share of the future MMA market for decades to come.

UAVs, with their capability for remote operation, well beyond the normal limits of aerial, offer the military the potential to maintain constant, 24 hour surveillance of an area, perhaps thousands of miles from the nearest base, with a number of assets (UAV’s) employed instead of a single, protected by a number of RN ships in the desperate hunt for her. The German pocket battleship Admiral Graf Spee is well remembered.

The largest pocket battleship to enter action in World War II was the German pocket battleship Admiral GRAF SPEE. When war broke out in early September 1939, her crew then ordered to avoid any action involving enemy naval forces. He sank his first victim off the Brazilian coast and then crossed the South Atlantic to prey on the shipping lanes off West Africa, where he sank four more ships, then briefly deploying into the Indian Ocean. Two more ships fell victim to the Kriegsmarine predation before the wireless operator of the German pocket battleship Admil Graf Spee sent a signal to the BAMS Commanding Officer, determining to continue surveillance over the area.

The German pocket battleship Admiral Graf Spee had sailed from Wilhelmshaven on August 23, 1939, as Europe teetered on the brink of war. When war broke out in early September she was therefore already on station to attack cargo laden ships, on the commerce routes to the United Kingdom and Europe. GRAF SPEE became a serious problem for the Royal Navy, as she rendezoned the seas wreaking destruction on solitary, unprotected merchant ships, tying up a number of RN ships in the desperate hunt for her.

Captain Hans Langsdorff, GRAF SPEE’s Commanding Officer, had determined to remain elusive, so he had been ordered to avoid any action involving enemy naval forces. He sank his first victim off the Brazilian coast and then crossed the South Atlantic to prey on the shipping lanes off West Africa, where he sank four more ships, then briefly deploying into the Indian Ocean. Two more ships fell victim to the Kriegsmarine predation before the wireless operator of the German pocket battleship Admiral Graf Spee sent a signal to the BAMS Commanding Officer, determine to continue surveillance over the area.

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The pocket battleship GRAF SPEE was lost with her Flagship, SCHARNHORST, in the battle of the Falkland Islands. Twenty-five years later, the pocket battleship named in his honour was driven to self-destruction in the same waters of the South Atlantic.

Looking beyond the results of this current competition, it is possible to see the eventual replacement of manned maritime patrol aircraft with large, very long range UAVs, at least for the surveillance role. Their ability to remain on station for very long periods of time at extended ranges from operating bases, free of the constraints of aircrew endurance, offers a capability that few nations with a requirement for maritime surveillance can afford to pass up.
At 6.18am GRAF SPEE’s forward turret fired the first salvo. EXETER returned fire two minutes later. followed closely by AJAX and ACHILLES. Within minutes, GRAF SPEE’s guns had wrecked EXETER’s B turret and damaged her bridge, killing many of her officers. However, her Commanding Officer, Captain E. S. Bell had survived, and, to save his ship from the hammering she was taking, ordered EXETER’s starboard torpedoes to be fired, forcing GRAF SPEE to turn away.

During the confusion Langsdorff saw his chance to finish off EXETER, but AJAX and ACHILLES raced in with all guns blazing, compelling the German to turn to face them. This provided an opportunity for EXETER to haul off and withdraw from the action, so all her guns were now out of action. Luck was with the British until AJAX’s two after turrets were put out of action by an 11-inch shell.

Harwood ordered torpedoes to be fired and opened the range of both ships under cover of smoke-screen. After 90 minutes the battle subsided. GRAF SPEE had suffered superficial damage to her superstructure and secondary armament, although her main armament remained intact.

Casualties had been heavy in EXETER and her damage control parties now fought to put out the fires and make her seaworthy for the long passage to the Falkland Islands where she could be repaired. EXETER had lost 64 officers and men and AJAX had two of her gun turrets out of action, with seven crew killed. ACHILLES, which had suffered least in the action, withdrew from the action, as all her guns were now out of action. At 7.00pm she halted in the middle of the estuary and observers thought that Langsdorff was waiting for darkness to make a dash through the waiting British warships.

A terrific explosion ripped through the ship, followed by a great column of smoke, and flames leaping into the sky. The second. At 6pm, onlookers were surprised to see many of her crew leaving, transferring to the TACOMA, a German merchant ship in the harbour. Then, at 6.19pm, GRAF SPEE left the inner harbour with only a skeleton crew on board. She slowly sailed down the fairway, followed by several launches. At 6.40pm she turned west, as if making for Buenos Aires, then turned again and moved slowly toward the open sea. At 7.00pm she sailed in the middle of the estuary and observers thought that Langsdorff was waiting for darkness to make a dash through the waiting British warships.

In the meantime the British also made sure cargo ships sailed daily from Montevideo, as this prevented GRAF SPEE from leaving. International regulations stated that 24 hours had to elapse after a merchantman had departed a neutral port before a belligerent could sail from the same place. This error cost him his advantage, for he could have outgunned the heavy cruiser at a greater range.

The German pocket battleship GRAF SPEE before the war. The pocket battleship was feared given their 11-inch guns and excellent range; however, they suffered in having little armour protection. The ships were also the first to be electrically welded and use diesel power exclusively.

Christmas. Langsdorff planned to attack the British HIGHLAND PRINCESS, since newspapers taken from his last sinking gave details of movements of merchant shipping in the area he was now in. As December 13 dawned, Harwood’s cruisers were steaming in line ahead, with the early morning visibility already gixxi. Around 6.15am AJAX the force he faced comprised one cruiser and two destroyers, and, by splitting the enemy’s fire, they

pocket battleship had taken over 50 hits. In addition, 50 per cent of the ammunition had been expended and food supplies were low and with no German bases or supply ships near enough to be of help. Over the next four days, intense diplomatic pressure and manoeuvring took place ashore. The Germans wanted 14 days to conduct repairs. The British wanted GRAF SPEE to stay in Montevideo for four or five days, at least, to enable reinforcements to reach AJAX and ACHILLES. However, on the diplomatic front, as so not to reveal their weakness in having just two waiting RN ships, the British were insisting GRAF SPEE should not be allowed to stay for longer than 24 hours.

In the meantime the British also made sure cargo ships sailed daily from Montevideo, as this prevented GRAF SPEE from leaving. International regulations stated that 24 hours had to elapse after a merchantman had departed a neutral port before a belligerent could sail from the same place. The battlecruiser HMS RENOWN and the aircraft carrier HMS ARK ROYAL were still several thousand miles away.

In Montevideo, erroneous BBC broadcasts reported on reinforcements of a battleship and aircraft carrier, probably ARK ROYAL, which had joined Harwood’s cruisers at the mouth of the River Plate. It was also known that heavy cruiser HMS CUMBERLAND was steaming from the Falklands at top speed, as a replacement for EXETER. German diplomats pleaded with the Uruguayan Government for 15 days grace to make GRAF SPEE seaworthy, but this was refused. The repair work went on aboard her as she received fuel, steel plates and welding equipment – preparation for the climactic battle to come.

Sunday December 17 dawned, with the populace of Montevideo flocking to the harbour and seashore, hoping to see the wounded German ship sail to death or glory. Diplomatic activity continued throughout the day, but shortly after 5pm GRAF SPEE raised first one anchor, then the second. At 6pm, onlookers were surprised to see many of her crew leaving, transferring to the TACOMA, a German merchant ship in the harbour. Then, at 6.19pm, GRAF SPEE left the inner harbour with only a skeleton crew on board. She slowly sailed down the fairway, followed by several launches. At 6.40pm she turned west, as if making for Buenos Aires, then turned again and moved slowly toward the open sea. At 7.00pm she sailed in the middle of the estuary and observers thought that Langsdorff was waiting for darkness to make a dash through the waiting British warships.

Speculation held that Hitler was furious because the ship was trapped and had ordered her to be scuttled. But communication between GRAF SPEE and Naval High
Command in Berlin expressly forbade internment and provided a memorable spectacle for the onlookers. Finally the ravaged bulk settled into the water, a humiliating end for a once proud warship that had sunk over 50,000 tons of allied shipping and tied down many Royal Navy warships.

Captain Langsdorff reached the safety of pro-German Argentina where he was to state in a note: "I am quite happy with a British production entitled ‘The Battle of the River Plate’ and seaman officer categories, is seen as a particularly serious issue and could be prejudicial to the future conduct of naval operations.” Mr Harris said.

"The inability of Navy to maintain its approved manpower levels is seen primarily as a failure on the part of the new centralised Defence personnel organisation, and the Department’s public relations."

The Council, which is a strong supporter of the Australian shipbuilding industry and the increasing involvement with the United States Military, the Council is firmly of the opinion that in negotiating a Free Trade Agreement with the United States, the Government should seek to have the US Government revoke the Jones Act as it applies to Australia. The Jones Act is an import legislation which prohibits the import of ships into the USA.

The Navy League expressed its particular concern that the Howard Government has presided over the virtual demise of the Australian shipping industry. The NLAs strongly recommends that the Government begin to address this situation by implementing the recommendations of the Sharp Morris Report (September 2003).

The report recommends the Government introduce a wide range of measures, particularly in the areas of regulation and taxation to re-vitalise the industry.

In 1959 the story of the Battle of the River Plate was told on the big screen with a British production entitled The Battle of the River Plate. Here is one of the original movie posters advertising the film which featured Peter Finch as Capt. Hans Langsdorff, Anthony Quayle as Commodore Harwood and John Gregson as Captain Bell. CO of EXETER.

Flash Traffic

Australian-owned and operated shipping services are seen not only as an important element of the Australian economy but also provide essential strategic lift capability for any military or quasi-military operations, whether offshore or in the direct defence of Australia, and as a reservoir of seafarers. The Navy League said.

The recent re-arrangement of Ministers within the Howard Ministry whereby the Economic and Industrial Relations Minister for Defence now has responsibility for defence personnel was welcomed “Minister Brough, as his first priority, must address the manpower problems in this vital area.” Mr Harris said.

Adelaide wins Collins contract

The Australian Submarine Corporation has been awarded a contract worth up to $3.5 billion over 25 years to refit the Collins class submarines.

The refits of each submarine will be conducted on a 12-month cycle in Adelaide under a long-term maintenance agreement to be signed by the ASC and the Defence Material Organization.

Senator Hill and Senator Minchin said the contract reaffirmed ASC’s reputation as Australia’s pre-eminent centre for submarine construction, modification, repair and maintenance.

The skilled ASC workforce at Osborne is integral to Australia’s long-term submarine capability. This contract is a significant investment in Australian technology and intellectual capital to ensure the proper service and maintenance of our fleet, which are the most capable conventional submarines in the world.

The initial duration of the agreement is for 15 years, with the option to extend it for a further 10 years. Each refit of a submarine costs about $10 million. The fleet of six Collins class submarines will be refit every seven years over their 28-year lives. The 25-year contract could be worth up to $3.5 billion, the majority of which will be spent in South Australia providing full cycle dockings — a huge boost to the South Australian economy.

The remainder will be spent on other submarine maintenance activities.
including mid cycle dockings and other contracts. The contract will be carried out primarily in SA and Western Australia, where the submarines are homeported.

It provides significant benefits to Defence, local shipyards and subcontractors by securing long-term, in-country support for a key strategic defence capability while providing commercial certainty to ASC.

ASC completed the submarine build contract earlier this year and has been involved in maintenance of the Collins-class submarines since 1996.

HMAS WALLER will be the first submarine to be refitted under the new contract, which is expected to commence in late 2004. HMAS WALLER will benefit from the experience ASC has gained on the current refits of HMAS COLLINS and FARNCOMB.

New sweeps delivered

ADI Limited has handed over in Adelaide the first of 16 new generation acoustic minesweep vessels ordered by the RAN.

The Australian Acoustic Generator (AAG) is a water driven, turbine powered sweep which can be programmed to emulate the acoustic signatures of specific classes of ships. Developed by ADI in conjunction with the South Australian company, Resonance Technology and DSTO, the AAG reflects Australia's ability to design and manufacture world leading mine countermeasures systems.

The RAN and the Polish Navy purchased the first generation AAG some three years ago. ADI made enhancements to the generator following a test and evaluation program by the RAN, and additional orders followed earlier this year.

Compared to older technology noise generators, the AAG provides a stable acoustic line structure, increased towing speed range and an acoustic signature which can be programmed to emulate the acoustic signature of a particular class of ship. In addition, the features are required to detect modern mines equipped with sophisticated sensors and computerized signal processing capabilities.

Eight countries including Denmark, Japan and the United States have bought the system.

RAN begins Super Seaplane trials

The RAN has begun acceptance testing of the SH-2G (A) as an Interim Training Helicopter (ITH) after receiving a critical 'tent' to proceed from the Australian Commonwealth. The first Super Seaplane was provisionally accepted at a ceremony at Nowra last October.

Kaman Aerospace International Corporation presented the first aircraft for production acceptance in July following the Commonwealth's decision to continue to plan for production acceptance, upon completion of the first year of Critical Design Reviews of the final integration software.

In parallel with the acceptance process, the RAN's Super Seaplane helicopter squadron, 805 Squadron, has commenced training of the SH-2G (A) maintainers. Additionally, Kaman's Australian agency, for training Australian Navy personnel, Scientific Management Associates, has now been certified to conduct flight training.

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The first helicopter recently landed aboard HMAS WARRAMUNGAR which was berthed at Garden Island, Sydney, at the time.

"This is a major milestone for Kaman Aerospace as well as the Australian Project Office," said Saul Bronsdon, Kaman's General Manager of Helicopter Programs. "The successful completion of the detailed software review and commencement of the training by 805 Squadron maintainers and pilots is a significant event in the overall schedule for final acceptance and operational introduction of the Super Seaplane". Kaman, along with Northrop Grumman Information Technology (NGIT) and Computer Sciences Corporation (CSC), will continue to develop the Super Seaplane's final operational system software while the aircraft training and shipboard interface testing proceed in parallel.

SH-2G (A) flight training will initially be for Australian Navy test pilots that will conduct the flight testing and subsequently training transition for 805 Squadron instructor aircrew. Kaman is planning to have six of the eleven SH-2G (A) Super Seaplanes accepted in order to support the initial flight test and training program. Four additional Super Seaplanes are completing fit out at Kaman's Western Australian facility in Geraldton for final acceptance and operational introduction of the Super Seaplane.

The Australian Defence Force is looking towards a SH-2G (A) training and utility capability under an Australian Military Type Certificate in the second quarter of 2004 and delivery of the full capability of the TH-67 and Super Seaplane system software by the end of 2004.

WARRAMUNGAR’S ESSM firing success

The RAN has successfully test fired another of the new Evolved SeaSparrow Missile (ESSM). The ESSM is one of the next generation of ship self-defence weapons against the latest anti-ship missiles.

The firing took place from HMAS WARRAMUNGAR at the USN's Pacific Missile Range Facility off Hawaii. HMAS WARRAMUNGAR is the first Anzac to be fitted with the missile and leads the way for it to be brought into service in the remaining Anzac ships.

The test firing off WARRAMUNGAR is part of the operational evaluation stage of the project which is being managed by the Defence Materiel Organization, while the DSTO participated in the development and test programs for the missile.

The missile has been developed, tested and manufactured under a cooperative program by Australia, Canada, Denmark, Germany, Greece, the Netherlands, Norway, Spain, Turkey and the United States.

The ESSM is now expected to be fitted in the other Anzacs along with significant combat system software and illumination radar upgrades.

This will make the RAN the first nation to introduce the ESSM into active service.

Thales sonar upgrade for Collins class

The Defence Materiel Organization has signed a $22.9 million contract with Thales Underwater Systems Pty of Rydalmere NSW to provide a new suite of state-of-the-art sonar systems to the Collins Class submarine. Thales is the prime contractor for the Collins Class submarines.

The contract involves the implementation of Thales Underwater Systems' (TUS) state-of-the-art Scylla Sonar Interface (SSI) Sonar display processing engine that has already been service with the RAN in the Collins Class fast-track combat system augmentation project.

This upgrade contract introduces the latest elements of the new SSI intuitive sonar display processing from Thales highly successful TSM 2233 sonar that is already being implemented globally on Agosta 90B and other submarines.

The SSI displays and data processing will be integrated with the existing Thales Scylla sonar arrays and processing suite that have proven very successfully since the launch of the first of the Collins Class, HMAS COLLINS, in 1993.

The upgraded sonar will be integrated with the new replacement US Navy CCS MK II Combat System (produced by Raytheon) to be manufactured and introduced to the Collins Class under the RCS Project.

The introduction of the SSI Processor across all six of the Collins Class submarines represents a major step forward for the Collins Class submarine operators with a comprehensive suite of state of the art sonar display capabilities that maximize the sonar operator's target detection, localization and tracking capabilities.

Under this contract the Collins Class submarines will be further developed with additional sonar display capabilities across the full set of functions within the Collins Class SCYLLA Sonar Suite. In addition, Thales will also be implementing a new sonar high bandwidth data port functionality based upon technology from the Defence Science and Technology Organization (DSTO). The new SSI 'opens the architecture' through TUS leading approach in design, integration and support systems in conjunction with the DSTO. Thales Underwater Systems will also be providing capabilities for the future development of an integrated Self-Noise Monitoring processor to be housed within the Collins Class sonar.

The introduction of this significant sonar enhancement will ensure that the Collins Class submarines maintain their world class sonar capability. This new system maximizes the investment that the Commonwealth has already made in the Collins Class, and provides the foundation for the future continuous enhancement of Australia's submarine capability.

Air Warfare Destroyers for PLAN

The Chinese People's Liberation Army Navy's (PLAN) second Type 052C guided-missile destroyer was launched from the Jiangnan shipyard in Shanghai on 29 October 2003.

The first of the Type 052C class, designated Lanzhou by some Chinese and Western sources, was launched at the same yard in April of 2003 and is nearing the sea trials stage.

The class are thought to displace approximately 6,000 tonnes with a primary mission of air defence. The Type 052C is fitted with a four-face phased-array radar system, leading some to call it the Chinese Aegis.

While sharing the same basic hull as the Type 052, the Type 052C is fitted with two single-arm launchers for the Russian-made St-1 medium-range air-defence missile system, and the 29 mm 052C is fitted with vertical launchers believed to be the HQ-9 theatre air-defence missile system.

Malaysian OPVs arrive

The Royal Malaysian Navy's second MEKO A100 class offshore patrol vessel (OPV) has arrived in Lumut in Malaysia, where it will be outfitted and undergo sea trials. The keel for this second ship was laid on 21 December 2001.

The first ship left Hamburg on 1 April and is expected to enter service in late 2004.

The last four units ordered by Malaysia will be built at the PSC NDSN shipyard in Malaysia.

The ships will be fitted with a 76mm gun and a Mauser 27mm automatic cannon aft above the medium helicopter platform. They will also be fitted for the French made MM-40 Exocet surface-to-surface missile and a short-range air-defence system. It is thought that up to 21 ships may be ordered.
Thailand plans for future

New Thai Navy chief ADM Chumpol Pujatusanee plans to improve combat readiness by acquiring new ships with the additional funding the government has promised for the next 10 years. ADM Chumpol succeeded ADM Thaweesak Somapat recently. He said the Defence Ministry budget was set to rise from 16 billion baht to 24 billion baht a year.

The navy planned to purchase two frigates from Britain for about 10 billion baht. Under a bilateral agreement, Britain would import Thai agricultural products or find markets for them as part of the deal.

Other deals would include new armaments and radar systems worth 900 million baht for the aircraft carrier Chakri Naruebet (150 million baht to be paid by mid-2000). Frigate NRT 209 (3 billion baht), and two to four offshore patrol vessels (1.5 billion baht). India seeks more Barak

With the much-delayed indigenous surface-to-air (SAM) Trishul missile program still floundering and with no near completion, the Indian Navy is planning to acquire more Israeli Barak anti-missile defense systems for its front-line warships.

The Indian Navy had proposed for installation of six Barak systems on its Delhi Class destroyers and Godavari Class guided-missile frigates. However, it was decided to delay the Barak program for the frigates because of their timing and cost. The program will be restarted, and the Barak system will be installed on the Delhi Class destroyers.

The Barak system is a multi-mission weapon that can engage a wide range of targets, including surface, air, and subsurface vessels. It is designed to provide air defense, anti-ship, and anti-submarine capabilities.

The Barak system is being developed by the Israel Aerospace Industries (IAI) and is a joint venture between Israel and India. The system is expected to be delivered in 2022 and will be installed on the Delhi Class destroyers.

Final Bob Hope class delivered

Northrop Grumman Corporation’s Ship Systems sector has delivered the first Bob Hope class anti-missile defense ship to the US Navy. The Bob Hope class is a new class of anti-missile defense system designed to provide enhanced capability against advanced anti-ship missiles and cruise missiles.

The Bob Hope class will be deployed to the Western Pacific and the Gulf of Aden to provide air defense and anti-missile defense capabilities.

Pontoon loss sank submarine

The Russian November class submarine K-159 sank in the Barents Sea on August 30 because the pontoons keeping it afloat tore off in a violent storm. The loss of the submarine will be investigated by the Russian Navy.

The Russian Navy Commander-in-Chief ADM Vladimir Kuroyedov has said that the wreck of the K-159 will definitely be raised. The submarine sank in the early hours of August 30 in the Barents Sea on its way to Polyarny where it was supposed to be scrapped.

The Russian Navy plans to conduct successful sea trials and conduct an excellent rating test of the submarine before it is raised. The submarine will be raised using a crane and raised at the site where it sank.

Delta III tests fire missile

Russia has successfully test-fired a submarine launched intercontinental ballistic missile (ICBM) from the Bob Hope class. The missile was launched by the Project 678BDR (Delta III) submarine PODOLSK of the Russian Pacific Fleet stationed at the Far Eastern Okhotsk.

Minutes later, it successfully hit its target at the Chirka military target area near the Barents Sea in Russia’s northeast. A Russian news agency quoted navy spokesman Igor Dygalo as saying.

ALMIRANTE WILLIAMS commissions

The former Royal Navy Type 22 frigate HMS SHEFFIELD has been commissioned as the Chilean ALMIRANTE WILLIAMS. Military and civilian authorities of Chile, the United Kingdom and other countries attended the ceremony. During the commissioning, the national ensign and commissioning pennant were hoisted and the ship officially named ALMIRANTE WILLIAMS.

ALMIRANTE WILLIAMS is the first of three second-hand ships the Chilean Government has authorized the navy to purchase under the terms of Project Puente (Bridge). The government is part of the efforts to replace ships of the current naval force that are past their life expectancy. In addition, Project Puente also involves the construction of three new ships; the first to be built overseas and the next two at ASMAR, Talcahuano.

Next-generation VLS designated MK 57

The USN has officially designated Raytheon’s Advanced Vertical Launching System as the MK 57 Vertical Launching System (MK-57 VLS).

The MK-57 Lancer is being developed for DD (X) - the next-generation destroyer now being developed by the DD (X) National Team. Raytheon Integrated Defense Systems serves as the ship's weapon systems integrator for DD (X), and the MK-57 development is led by Raytheon in partnership with United Defense, L.P. Construction of the first DD (X) ship is expected to begin in 2005.

We are proud to be in the forefront of developing new naval systems for DD (X) that will significantly improve ship firepower and survivability,” said Jack Cronin, Raytheon vice president for the DD (X) program. "In addition, the program - the MK-57 VLS will reduce costs by lowering manufacturing requirements and facilitate the Navy's open architecture vision for ship electronic systems.

The MK-57 will be able to fire all of the missiles currently in the USN inventory and projected to be in inventory for the foreseeable future. The MK-57 is scaled to accept the heavier missiles that could potentially be used in the future for ballistic missile defence, as well as lighter missiles such as the Extended Range Missiles (ERM). The MK-57 is also expected to be incorporated into future US and foreign navy ship designs.

India seeks more Barak

With the much-delayed indigenous surface-to-air (SAM) Trishul missile program still floundering and with no near completion, the Indian Navy is planning to acquire more Israeli Barak anti-missile defense systems for its front-line warships.

The Indian Navy had planned for installation of six Barak systems on its Delhi Class destroyers and Godavari Class guided-missile frigates. However, it was decided to delay the Barak program for the frigates because of their timing and cost. The program will be restarted, and the Barak system will be installed on the Delhi Class destroyers.

The Barak system is a multi-mission weapon that can engage a wide range of targets, including surface, air, and subsurface vessels. It is designed to provide air defense, anti-ship, and anti-submarine capabilities.

The Barak system is being developed by the Israel Aerospace Industries (IAI) and is a joint venture between Israel and India. The system is expected to be delivered in 2022 and will be installed on the Delhi Class destroyers.

Final Bob Hope class delivered

Northrop Grumman Corporation’s Ship Systems sector has delivered the first Bob Hope class anti-missile defense ship to the US Navy. The Bob Hope class is a new class of anti-missile defense system designed to provide enhanced capability against advanced anti-ship missiles and cruise missiles.

The Bob Hope class will be deployed to the Western Pacific and the Gulf of Aden to provide air defense and anti-missile defense capabilities.

Pontoon loss sank submarine

The Russian November class submarine K-159 sank in the Barents Sea on August 30 because the pontoons keeping it afloat tore off in a violent storm. The loss of the submarine will be investigated by the Russian Navy.

The Russian Navy Commander-in-Chief ADM Vladimir Kuroyedov has said that the wreck of the K-159 will definitely be raised. The submarine sank in the early hours of August 30 in the Barents Sea on its way to Polyarny where it was supposed to be scrapped.

The Russian Navy plans to conduct successful sea trials and conduct an excellent rating test of the submarine before it is raised. The submarine will be raised using a crane and raised at the site where it sank.

Delta III tests fire missile

Russia has successfully test-fired a submarine launched intercontinental ballistic missile (ICBM) from the Bob Hope class. The missile was launched by the Project 678BDR (Delta III) submarine PODOLSK of the Russian Pacific Fleet stationed at the Far Eastern Okhotsk.

Minutes later, it successfully hit its target at the Chirka military target area near the Barents Sea in Russia’s northeast. A Russian news agency quoted navy spokesman Igor Dygalo as saying.

ALMIRANTE WILLIAMS commissions

The former Royal Navy Type 22 frigate HMS SHEFFIELD has been commissioned as the Chilean ALMIRANTE WILLIAMS. Military and civilian authorities of Chile, the United Kingdom and other countries attended the ceremony. During the commissioning, the national ensign and commissioning pennant were hoisted and the ship officially named ALMIRANTE WILLIAMS.

ALMIRANTE WILLIAMS is the first of three second-hand ships the Chilean Government has authorized the navy to purchase under the terms of Project Puente (Bridge). The government is part of the efforts to replace ships of the current naval force that are past their life expectancy. In addition, Project Puente also involves the construction of three new ships; the first to be built overseas and the next two at ASMAR, Talcahuano.

Next-generation VLS designated MK 57

The USN has officially designated Raytheon’s Advanced Vertical Launching System as the MK 57 Vertical Launching System (MK-57 VLS).

The MK-57 Lancer is being developed for DD (X) - the next-generation destroyer now being developed by the DD (X) National Team. Raytheon Integrated Defense Systems serves as the ship's weapon systems integrator for DD (X), and the MK-57 development is led by Raytheon in partnership with United Defense, L.P. Construction of the first DD (X) ship is expected to begin in 2005.

We are proud to be in the forefront of developing new naval systems for DD (X) that will significantly improve ship firepower and survivability,” said Jack Cronin, Raytheon vice president for the DD (X) program. "In addition, the program - the MK-57 VLS will reduce costs by lowering manufacturing requirements and facilitate the Navy's open architecture vision for ship electronic systems.

The MK-57 will be able to fire all of the missiles currently in the USN inventory and projected to be in inventory for the foreseeable future. The MK-57 is scaled to accept the heavier missiles that could potentially be used in the future for ballistic missile defence, as well as lighter missiles such as the Extended Range Missiles (ERM). The MK-57 is also expected to be incorporated into future US and foreign navy ship designs.
MBDA's new Seawolf Block 2 naval point defence missile has been successfully fired for the first time at the Vidsel missile test range in Sweden. The new Seawolf, which will enter service with the RN in 2005, was test fired on 4 September 2003. The missile is designed to operate with existing and new Vertical Launch Seawolf missile systems while benefiting from cost-effective new missile technologies introduced by MBDA. These technologies include a new electronic fin actuation system to replace the former gas actuation system, resulting in improved missile control and extended range. Drawing on experience gained from MBDA's highly successful ASRAAM air-to-air missile programme, Seawolf now incorporates ASRAAM's multi-chip architecture to provide more in-flight computing power in a much smaller package. This technology also greatly simplifies the production process. The new Seawolf incorpoating IR/IR sensors has also been developed to improve engagement success against very low sea skimming, low contrast targets. Seawolf enhancements serve to reduce cost and component package size.

MBDA has developed this cost-effective missile while working with the Royal Navy to meet its future Seawolf warstock requirements. Importantly the Block 2 missile will be compatible with the Seawolf shipboard installations in service with the Royal Navy and other Seawolf users. Of significant logistic benefit to users is the fact that both the conventional and vertical launch versions of the new Block 2 missile now share a common modularised vertical launch head. Conventional launchers have almost six times the range of the aircraft it will replace, and can carry twice the ordnance. This is a considerable improvement in performance over the FTR-24 from the Desert Ship facility which is expected to lead to implementation of the upgrade into Fleet missiles in the near future.

The launch achieved all test objectives, demonstrating highly capable performance throughout a sequence of high-G turns.

Seawolf's multichip module to combine standard aircraft cruise flight with vertical take-off and landing, and has a speed of 32kt. The ship and its sister, KOCH, became symbolic of France's desire for military independence from NATO.

Seawolf's carrier variant. VI. Seawolf, entered service on the Royal Navy's Type 42 frigates and the Type 22 frigates in 1997. The first Seawolf ships entered service with the Royal Navy's seawolf missile system for the Type 23 frigates and conventional launch versions, without the turnover boost, for the Type 22 battle of 1997. Seawolf has been the UK Royal Navy's standard naval point defence weapon system since first coming into service on the later Type 124 Class frigates and the Type 22 frigates in 1979. The first Seawolf ships entered service on the Royal Navy's Type 23 frigates. Since 1979 over 1,000 Seawolf missiles have been fired and the system is expected to enter service with the later l.eander Class frigates. VI. Seawolf, captured by the French defence ministry.

Osprey back at sea

The Marine Corps MV-22 Osprey tilt-rotor aircraft has successfully completed its first series of sea trials on September 23, using the amphibious assault ship USS BATAAN (LHD-5) as a testing platform. With the latest version of the aircraft, code named Osprey, has been delivered to the Marine Corps. The ship and its sister, COCH, became symbolic of France's desire for military independence from NATO.

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track hundreds of targets while defending against multiple incoming aircraft, missiles, submarines, torpedoes, and attacking ships, and automatically implement defences to protect the fleet. Aegis is capable of countering the existing and emerging threats to a naval battle group, as well as striking inland targets.

APAR tested

The Air Defence and Command Frigate HNLMS DE ZEVEN PROVINCIEN successfully tested fired its new air defence system on November 26 and 27 2003. Together with Germany, the Netherlands is the first country in the world to have such a system.

The Standard SM-2 missiles were fired from DE ZEVEN PROVINCIEN at unmanned incoming targets. These launches mark the first time the technical working of the air defence system has been fully demonstrated. It involved the testing of a new guidance principle through the help of the multifunctional APAR (Active Phased Array Radar) and the missiles adapted for that purpose. The APAR system uses a 3 D rotational radar for volume search and tracking. Using the pencil beam technology of the phased array radar, the ship is able to designate up to 16 targets simultaneously.

The system has been developed in close cooperation with the Royal Netherlands Navy, the Chilean Navy and the Royal Canadian Navy. The U.S. Navy has also been involved, as have been various defence related industries and research institutes in these countries.

The Scorpion submarine for Chile

Chilean Defence Minister Michelle Bachelet and the Commander of the Naval Admiral Miguel Angel Vergara presided at the christening ceremony of the first of two French-Spanish Scorpion class submarines in Cherbourg, France. Once the BERNARDO O'HIGGINS becomes totally operational and is delivered to Chile in the second half of 2004 it will be Latin America's most modern submarine.

The Scorpion class submarine BERNARDO O'HIGGINS is the first completely new vessel to be incorporated to the Chilean Navy since 1984 and is described as "the best conventional submarine of our time."

THE KINNAIRD REVIEW - A CRITICAL REPORT

As has been remarked in THE NAVY before, the Department of Defence has been the subject of numerous reviews and inquiries ever since the separate Service Departments were abolished and their functions merged into a single department 30 years ago. The Kinnaird review into defence acquisition procedures is likely to prove one of the most significant, involving as it does the very large sum of money required to equip a modern defence force.

The Kinnaird recommendations to overcome deficiencies found in the existing acquisition procedures were not confined to the Defence Material Organisation (DMO), but extended to the initial capability assessment process which it continued was failing to provide sufficient advice to enable the government to determine resource needs and priorities in the light of possible options and costs.

The three-man team headed by company director and businessman Malcolm Kinnaird AO made 10 recommendations in all, four of which were referred to by Defence Minister Robert Hill at a press conference launching the review; they were decisions to:

1. Change the structure of the DMO (formed in 2000) and appoint a chief executive officer (CEO) who would be responsible to the Defence Minister for the financial management of the DMO and its 8000 staff.
2. Establish a new capability group within Defence, headed by a very senior official, to assess and cost projects before they proceed to the DMO.
3. Form an 8-member advisory board including four senior private sector representatives to provide outside advice to DMO.
4. Give the new CEO an expanded range of powers to improve the delivery of projects; the powers would include appointments and remuneration.

Other recommendations elaborated on the foregoing.

Suggestions of a very comprehensive report follow. With regard to (1) and (4) the DMO will in effect be "privatised" and the new CEO - the position was quickly advertised - quite apart from being responsible to the Defence Minister rather than to the Secretary of the Department, will decide if uniformed or civilian members will be appointed as project managers. Service personnel will need to be prepared for much longer than normal appointments or transfer to the public service to be considered. It seems the Service Chiefs, in their capacity as capability managers, may cease to have an input once the acquisition process gets under way.

THE NAVY

Piracy on the rise

The recommended establishment of a new capability group (2) headed by a 3-star level service officer or civilian is intended in the report published on the Vice Chief of the Defence Force (VCDF) who presently has responsibilities for capability definition and assessment as well as numerous other roles. Instead of creating another senior position it would seem preferable to appoint a less senior officer to relieve VCDF of the less important roles.

With regard to (3) the ADF already has many advisers, both inside and outside the Department; an excess of advice can be confusing rather than helpful.

Probably intentionally the Defence Minister qualified acceptance of the Kinnaird recommendations by saying they had been "largely accepted", thus providing the Government with a way out if some recommendations proved impractical. Cost overruns, such as those reported to have occurred with some items of equipment, are by no means restricted to defence projects, indeed it could be said cost blowouts are a feature of many major civil works. The Kinnaird objectives will not be achieved overnight but hopefully they will be realised in the longer term.

Piracy on the rise

THE MELBOURNE AGE in November reported a 26% increase in high seas attacks on ships in the first nine months of 2003 compared to the same period in 2002 - a jump from 271 to 344, an almost daily event.

Quoting the director of the International Maritime Bureau, it was stated that Indonesian waters headed the "black list," with 87 attacks, 24 taking place in the Malacca Straits, one of the most strategically important passages of water in the world.

The bureau director said there had been an alarming increase in violence with pirates using high-tech weaponry including sub-machine guns, rocket-propelled grenades and knives. Twenty-five crew members had been killed and very few of the attackers had been brought to trial; until this happened and the attackers punished, the figures were unlikely to be reduced.

Given the vital importance to Australia of the area in which this violence takes place, in both an economic and a security sense, it might be thought surprising the Government does not put its border protection forces to better use by assisting our neighbours to combat pirates rather than hunting a relatively small number (by international standards) of boat people.
emphasis should be placed on maritime power, with a benign to full hostilities in high intensity joint trouble before it gets to our shores. There is consequently one has freedom of action to use an area of sea for one's own thereby avoiding the actual use of the full range of their applying naval diplomacy as a means of keeping the peace and maritime nature of the Asia Pacific region, continued increased emphasis upon military engagement in the purposes for a period of time and, if required, deny its use to military capabilities.

The US Navy’s Arleigh Burke class destroyer USS Russell. Ships such as the Arleigh Burke class are important assets to the US military’s ability to wage war. Their impressive array of weapons, sensors and command facilities enable them act as sea control ships and even impose effects against terrorists many thousands of kilometres inland. (USN)

Australia confronts uncertain threats from global terrorism and regional instability with a renewed emphasis on meeting the trouble before it gets to our shores. There is consequently increased emphasis upon military engagement in the resolution of such crises. For this reason, and given the maritime nature of the Asia Pacific region, continued emphasis should be placed on maritime power, with significant implications for Australia’s Navy.

The application of maritime power encompasses a wide range of operational situations from peacetime constabulary or benign activities to full hostilities in high intensity joint situations involving the projection of power. This includes applying naval diplomacy as a means of keeping the peace and thereby avoiding the actual use of the full range of their military capabilities.

Fundamental to the exercise of maritime power and use of the sea is the ability to gain and maintain sea control. Sea control may be defined as that condition which exists when one has freedom of action to use an area of sea for one’s own purposes for a period of time and, if required, deny its use to an adversary. Importantly, sea control includes not only the sea surface, but also the air space above, the water and seabed below, and, particularly in a littoral environment, adjoining land areas. This is a critical capability for any maritime nation that seeks to preserve sovereignty over its resources, territories, right of free trade and interests, and is essential for the joint projection of power. Importantly, from a maritime perspective, implicit with sea control is control of the air above it. It is therefore, a joint responsibility. Without sea control Australia could not have fought in New Guinea in World War II and more recently, the ADF’s operations in East Timor would not have been possible without the ability to sustain the force by sea and the attendant sea control required to achieve this. For the ADF to undertake most of the objectives envisioned by the Government, it will need to establish a certain level of sea control in order for its operations to succeed.

In many senses, the ‘workhorses’ of the fleet, major surface combatants, which include both destroyers with a strong air warfare bias and general-purpose frigates, are the vital means by which the Government exercises sea control and its use of the sea in close partnership with the Air Force. Surface combatants are multi-purpose vessels, uniquely capable of operating across the full spectrum of operations, with an emphasis on anti-air, anti-surface and anti-submarine warfare, but with significant utility in many other areas.

Apart from their primary function of sea control, the surface combatant offers other unique capability options for Government. More specifically, the flexibility of surface combatants in rapid role change between different levels of operations and their ability to apply graduated force commensurate with the prevailing situation across a broad spectrum of operations, makes them particularly versatile assets. They are the smallest sea units that are deployed autonomously for extended periods for military tasks, and their numbers and capabilities allow them individually to cover a wide range of military, constabulary and diplomatic tasks. They are particularly useful in establishing maritime presence. They are also versatile building blocks for larger national and coalition formations, essential defensive elements of task groups, and contributors of organic helicopters to a force.

Because warships operating outside the 12 nm territorial sea of other countries do not challenge sovereignty in the way that land forces or over-flying air forces do, in some instances warships may be the preferred or only military diplomatic option available to the Australian Government. International legal regimes, such as the United Nations Law of the Sea Convention, allow for warships to linger indefinitely on station, providing ongoing presence and an immediate response to a developing situation. The influence of such presence involves fundamentally from credible combat power, and the demonstration of military capabilities that can be used to reassure, impress or deter a foreign power. Surface combatants possess substantial combat power, enabling them to exercise a range of influences, from the benign to the coercive, without violating national sovereignty. This range of response makes them particularly useful tools in periods of uncertainty or crises, providing the Australian Government with the maximum freedom of decision.

The utility of surface combatants in peacetime for policing, interdiction and boarding is considerable and Government has often called upon these inherent capabilities. Examples include southern ocean fisheries law enforcement, remote ocean border protection, support to Government agencies in the board and seizure of ships involved in illegal trafficking of contraband, and regional peace keeping support. In the diplomatic role, surface combatants provide a powerful psychological impression through their perceptible presence while retaining the ability to continue action through to combat if necessary.

While each of these roles can and have been very effectively performed by Australia’s surface combatant force, these types of activities cannot alone be allowed to determine the level of capability invested in new surface combatants. High intensity operations must remain the basic force determinant, for while advanced surface combatants can effectively contribute to the full spectrum of warfighting missions, the same assertion cannot be made for those ships tailored for the lower end of the spectrum. This is particularly relevant in an era of increasing violence when many of the military capabilities hitherto required for higher order contingencies, are becoming increasingly relevant in situations previously thought of as being constabulary in nature.

In higher intensity operations, surface combatants, which must be fully interoperable with our major allies, can be rapidly deployed and sustained for joint or combined
critical missions, but they are increasingly taking on new roles comes from the air in the form of air attack and long range air conflict many of these capabilities were exercised by objective safely, force protection-including area air defence-in escort to ensure ground forces and their support reach their critical for the joint projection of power in other than benign operations wherever Australia's national or international interests demand. Surface combatants provide a significant contribution to littoral manoeuvre and land operations and are critical for the joint projection of power in other than benign circumstances. This includes both open ocean and littoral escort to ensure ground forces and their support reach their objective safety, force protection-including area air defence-in support of littoral operations, maritime command and control, fire support for forces ashore, special forces insertion, limited sea lift and support, and evacuation. During the 2003 Iraq conflict many of these capabilities were exercised by Australian surface combatants, which very effectively integrated with the multinational maritime force.

In terms of evolving capability, surface combatants have undergone a significant transformation of their capabilities in recent years. White submarines still pose a threat to both merchant ships and naval vessels, the most significant threat comes from the air in the form of air attack and long range air and surface launched anti-ship cruise missiles. Previous generations of destroyers and frigates carried mostly defensive weapons to screen higher-value ships such as aircraft carriers, amphibious ships and merchant vessels from attack. Today, surface combatants can still carry out those critical missions, but they are increasingly taking on new roles such as land attack using both missiles and extended range guided munitions and theatre ballistic missile defence. With further improvement to their radars, combat systems and missiles, they will also likely play a key role in national or regional missile defence in the future.

In the future, Air Warfare Capable Destroyers will seamlessly integrate with other ADF assets, including the Joint Strike Fighter and Airborne Early Warning and Control aircraft (supported by Air to Air Refuelling aircraft). Over the Horizon Radar, Global Hawk, and land force capabilities (especially Ground Based Air Defence systems) to provide a pervasive, networked and continuous air defence umbrella for both maritime and joint littoral operations. This potent complementary joint capability will be critical in order to provide area air defence for an ADF task force deploying from Australian shores and establishing itself in some other place. Furthermore, an air warfare capable destroyer will provide a high level of air control, 24 hours a day, even in the absence of continuous aircraft support. This is particularly relevant given Australia's maritime geography and the extended ranges at which aircraft may be required to operate within our region. The Air Warfare Destroyer, while having a strong core air warfare bias, will not, however, only be used for air defence. Capable of operating at the highest end of the conflict spectrum, with their significant warfighting and maritime command and control capabilities, they will be Australia's primary sea control capability across the full spectrum of operations. Given their multi-role capability, the Air Warfare Destroyers could perhaps more appropriately be referred to as 'Sea Control Combatants'.

While the Air Warfare Capable Destroyers will be critical in maintaining air control, particularly during times and in areas where aircraft are not continuously available, they are by no means the sole requirement to achieve sea control. A balanced surface combat force is essential. The ANZAC Class frigates, which will complement the Air Warfare Destroyer, and which will be progressively updated to improve their self-defence capabilities, will equally need to be capable of working in the littoral environment as well as independently in the open ocean.

Maritime power is critical to Australia's national defence, given our enduring maritime geostategic circumstances. Fundamental to the exercise of maritime power and use of the sea is the ability to gain and maintain sea control. Major surface combatants, as part of a balanced fleet, provide this critical capability in close partnership with the Army and Air Force. The modern surface combatant remains an adaptable, flexible and potent instrument for the Government to apply to ensure continuous use of the sea and wherever and whenever diplomatic and/or military effect is desired.

MUTCH

PARRAMATTA (IV) joins the fleet
On Saturday morning 4 October 2003 at Sydney's Garden Island the RAN's newest Anzac class frigate was commissioned into the Navy. HMAS PARRAMATTA is the fourth ship to bear the name and is under the command of CMRD Michael Noonan RAN. The ceremony was attended by the Minister for Defence, Senator Robert Hill, numerous other Senators and MPs, the CDF General Cranmore, the Chief of Navy Vice Admiral Chris Ritchie, the Secretary of the Department of Defence Mr Ric Smith, the commissioning Lady Mrs Jill Green and ex-PARRAMATTA (III) crew members.

At a press conference at the gangway to the RAN's latest addition Senator Hill said "this ship is a credit to all who've been involved through to design and build. Ten years and all their sub-contractors, to the government officials who've worked through the DMO and the other various bodies contributing to its construction, to the crew of the ship that has worked it up to the commissioning ceremony today. It's a credit to them all and I think it's a great day for the Navy and its proud traditions, a great day for the Australian Defence Forces."

"I just want to take this opportunity to wish Commander Noonan and his crew well. We do live in uncertain times. We of course had one ship of this class engaged in action in the recent operations in the Gulf and it performed superbly. It demonstrates that in operations, these ships are just as good as they were planned to be. But they're largely made as good because of the quality of the crews that serve on them".

As the RAN White Ensign was broken for the first time on the ship a Sea King helicopter trailing a large White Ensign below it flew past with perfect timing, signalling the ship's entry into the RAN.
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Once the glamour ships and submarines of their respective navies, most eventually end their days in the shipbreakers' yards. Some, after years in reserve awaiting the recall to duty, were amongst them.

Among Royal Navy destroyers and frigates included were; DIAMOND. DEVONSHIRE. JAVELIN. ESKIMO. HORNET. SALERNO BAY. FORRESTAL and SARATOGA. Australia's MELBOURNE and SYDNEY appear in Part Five.

Many still looking graceful and well maintained. British cruisers such as SHEFFIELD. BOWMORE. BIRMINGHAM. GAMBIA. TIGER. LION. AJAX. CUMBERLAND. BULWARK. OCEAN. GLORY andunicorns with US entries including CORAL SEA. MIDWAY. FRANKLIN. BUNKER HILL. ORISKANY. BON HOME RICHARD. HORNET. SALERNO BAY. FORRESTAL and SARATOGA. Australia's MELBOURNE and SYDNEY appear in Part Five.

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The strategic background to Australia’s security has changed in recent decades and in some respects become more uncertain. The League believes it is essential that Australia develops capability to defend itself, paying particular attention to maritime defence. Australia is, of geographical necessity, a maritime nation whose prosperity strength and safety depend to a great extent on the security of the surrounding ocean and island areas, and on seaborne trade.

The Navy League:

- Believes Australia can be defended against attack by other than a super or major maritime power and that the prime requirement of our defence is an evident ability to control the sea and air space around us and to contribute to defending essential lines of sea and air communication to our allies.
- Supports the ANZUS Treaty and the future reintegration of New Zealand as a full partner.
- Urges a close relationship with the nearer ASEAN countries, PNG and the Island States of the South Pacific.
- Advocates a defence capability which is knowledge-based with a prime consideration given to intelligence, surveillance and reconnaissance.
- Advocates the acquisition of the most modern armaments and sensors to ensure that the ADF maintains some technological advantages over forces in our general area.
- Believes there must be a significant deterrent element in the Australian Defence Force (ADF) capable of powerful retaliation at considerable distances from Australia.
- Believes the ADF must have the capability to protect essential shipping at considerable distances from Australia, as well as in coastal waters.
- Supports the concept of a strong modern Air Force and highly mobile Army, capable of littoral and jungle warfare as well as the defence of Northern Australia.
- Supports the development of amphibious forces to ensure the security of our offshore territories and to enable assistance to be provided by sea as well as by air to friendly island states in our area.
- Endorses the transfer of responsibility for the coordination of Coastal Surveillance to the defence force and the development of the capability for patrol and surveillance of the ocean areas all around the Australian coast and island territories, including the Southern Ocean.
- Advocates measures to foster a build-up of Australian-owned shipping to ensure the carriage of essential cargoes in war.
- Advocates the development of a defence industry supported by strong research and design organisations capable of constructing all needed types of warships and support vessels and of providing systems and sensor integration with through-life support.
- Supports the concept of a Navy capable of effective action off both East and West coasts simultaneously and advocates a gradual build up of the Fleet to ensure that, in conjunction with the RAAF, this can be achieved against any force which could be deployed in our general area.
- Is concerned that the offensive and defensive capability of the RAN has decreased markedly in recent decades and that with the paying-off of the DDGs, the Fleet will lack air defence and have a reduced capability for support of ground forces.
- Advocates the very early acquisition of the new destroyers as foreshadowed in the Defence White Paper 2.
- Advocates the acquisition of long-range precision weapons to increase the present limited power projection, support and deterrent capability of the RAN.
- Advocates the acquisition of unmanned surveillance aircraft such as the GLOBAL HAWK primarily for offshore surveillance.
- Advocates the acquisition of sufficient Australian-built afloat support ships to support two naval task forces with such ships having design flexibility and commonality of build.
- Advocates the acquisition at an early date of integrated air power in the fleet to ensure that ADF deployments can be fully defended and supported from the sea.
- Advocates that all Australian warships should be equipped with some form of defence against missiles.
- Advocates that in any future submarine construction program all forms of propulsion be examined with a view to selecting the most advantageous operationally.
- Advocates the acquisition of an additional 2 or 3 updated Collins class submarines.
- Supports the maintenance and continuing development of the mine-countermeasures force and a modern hydrographic/oceanographic capability.
- Supports the maintenance of an enlarged, flexible patrol boat fleet capable of operating in severe sea states.
- Advocates the retention in a Reserve Fleet of Naval vessels of potential value in defence emergency.
- Supports the maintenance of a strong Naval Reserve to help crew vessels and aircraft in reserve, or taken up for service, and for specialised tasks in time of defence emergency.
- Supports the maintenance of a strong Australian Navy Cadets organisation.

The League:

Calls for a bipartisan political approach to national defence with a commitment to a steady long-term build-up in our national defence capability including the required industrial infrastructure.

While recognising current economic problems and budgetary constraints, believes that, given leadership by successive governments, Australia can defend itself in the longer term within acceptable financial, economic and manpower parameters.
An impressive and powerful sight. The Nuclear powered Nimitz class aircraft carrier USS GEORGE WASHINGTON, with escorts, heading towards the Persian Gulf region for a scheduled deployment. The surface companion escort consists of three Ticonderoga class cruisers, three Arleigh Burke class destroyers, one FFG-07 class frigate and a support ship. Large escort flotillas such as this haven’t been seen since the height of the Cold War and are more to do with the escort’s ability to fire Tomahawk cruise missiles than defending against conventional threats such as aircraft or submarines. (USN)

The RN Type 22 batch 1 frigate HMS CLIF FOLLOWLAND at sea and mounting a new 114mm Mk-8 gun with stealth shielding. The batch 3 Type 22s are the only Type 22s still in service with the RN. The former batch 2 Type 22 frigate, SHEFFIELD, was recently re-commissioned in the Chilean Navy with more of the batch 2s expected to end up in Chilean hands. (see Flash Traffic section in this edition for more details). (RNT)
HMAS MANOORA at sunset in the Solomon Islands during the Australian Operation to restore law and order to the country. From the Persian Gulf to the South Pacific, the UPV capability has again proven itself to be worth its weight in gold to the RAN, ADF, and Australia.

It can only be hoped that the lessons of having a large aviation capable ship are not lost on successive governments. (RAN)
The Navy League of Australia

APPLICATION FOR MEMBERSHIP

HISTORICAL

The Navy League was established in Australia in 1901, initially in the form of small branches of the United Kingdom Navy League (established in 1897) and since 1950 as an autonomous national body headed by a Federal Council consisting of a Federal President and representatives of the States, the Australian Capital Territory and the Northern Territory.

The Navy League of Australia is now one of a number of independent Navy Leagues formed in countries of the free world to influence public thinking on maritime matters and create interest in the sea.

The Navy League of Australia cordially invites you to join us in what we believe to be an important national task.

MEMBERSHIP

Any person with an interest in maritime affairs, or who wishes to acquire an interest in, or knowledge of, maritime affairs and who wishes to support the objectives of the League, is invited to join.

OBJECTIVES

The principal objective of the Navy League of Australia is “The maintenance of the maritime well being of the Nation” by:

- Keeping before the Australian people the fact that we are a maritime nation and that a strong Navy and a sound maritime industry are indispensable elements of our national well being and vital to the freedom of Australia
- Promoting defence self reliance by actively supporting manufacturing, shipping and transport industries
- Promoting, sponsoring and encouraging the interest of Australian youth in the sea and sea services, and supporting practical sea-training measures.
- Co-operating with other Navy Leagues and sponsoring the exchange of cadets for training purposes.

ACTIVITIES

The Navy League of Australia works towards its objectives in a number of ways:

- By including in its membership leading representatives of the many elements which form the maritime community
- Through soundly-based contributions by members to journals and newspapers, and other media comment.
- By supporting the Australian Navy Cadets, and assisting in the provision of training facilities.
- By encouraging and supporting visits by recognised world figures such as former United States Chiefs of Naval Operations and Britain’s First Sea Lords.
- By publishing *The Navy*, a quarterly journal reporting on local and overseas maritime happenings, past, present and projected.
- By maintaining contact with serving naval personnel through activities arranged during visits to Australian ports of ships of the Royal Australian and Allied Navies.
- By organising symposia, ship visits and various other functions of maritime interest throughout the year.

Member participation is encouraged in all these activities.

JOINING THE LEAGUE

To become a Member of The League, simply complete the Application Form below and post it, together with your first annual subscription of $30.00 (which includes the four quarterly editions of *The Navy*), to the Hon Secretary of the Division of the Navy League in the State in which you reside, the address of which is as follows:

VICTORIAN DIVISION: PO Box 1303, Box Hill Delivery Centre, Vic 3128.
QUEENSLAND DIVISION: PO Box 1982, George Street Post Shop, Brisbane, Qld 4003.
SOUTH AUSTRALIAN DIVISION: GPO Box 1126, Adelaide, SA 5001.
TASMANIAN DIVISION: C/- 42 Amy Road, Lorraine, 7325.
WEST AUSTRALIAN DIVISION: C/- 3 Pepper Way, Myaree, WA 6154.

If you live in the Australian Capital Territory or the Northern Territory, please post the form to the Hon Secretary of the New South Wales or South Australian Division respectively.

Subscriptions are due on 1 July in each year, and your membership will be current to 30 June immediately following the date on which you join the League, except that if your first subscription is received during the period 1 April to 30 June in any year, your initial membership will be extended to 30 June in the following year.

THE NAVY LEAGUE OF AUSTRALIA

Application for Membership

To: The Hon Secretary, The Navy League of Australia

Division

Sir or Madam,

I wish to join the Navy League of Australia, the objectives of which I support, and I enclose a remittance for $30.00 (including $2.73 GST) being my first annual subscription to 30 June next.

Name

(Mr) (Mrs) (Ms)

Page 1 of 1
JOIN THE
AUSTRALIAN NAVY CADETS

If you are between the ages of 13 and 18 years:

The Australian Navy Cadets provide for the spiritual, social and educational welfare of boys and girls and help to develop them in character, a sense of patriotism, self-reliance, citizenship and discipline.

Uniforms are supplied free of charge.

Cadets are required to produce a certificate from their doctor to confirm they are capable of carrying out the normal duties and activities of the Cadet Units. If injured while on duty, Cadets are considered for payment of compensation.

Parades are normally held during a weekend day or on Friday evening.

The interesting syllabus of training covers a wide sphere and includes seamanship, handling of boats under sail and power, navigation, physical training, rifle shooting, signalling, splicing of ropes, general sporting activities and other varied subjects.

Instructional camps are arranged for Cadets and they are also given opportunities, whenever possible, to undertake training at sea in ships of the Royal Australian Navy.

Cadets, if considering a sea career, are given every assistance to join the Royal Australian Navy or Mercantile Marine, but there is no compulsion to join these Services.

For further information, please contact the Senior Officer in your State, using the addresses provided below:

NEW SOUTH WALES: Cadet Liaison Officer, HMAS Penguin, Middle Head Road, Mosman NSW 2088. Telephone: (02) 9960 0550.

QUEENSLAND: Senior Officer ANC, Naval Support Office, Bulimba Barracks, PO Box 549 Bulimba QLD 4171. Telephone: (07) 3215 3512.

WESTERN AUSTRALIA: Cadet Liaison Officer, HMAS Stirling, PO Box 228, Rockingham WA 6168. Telephone: (08) 9550 0488.

SOUTH AUSTRALIA: Cadet Liaison Officer, Naval Support Office, Keswick Barracks, Anzac Highway, Keswick SA 5035. Telephone: (08) 8305 6708.

VICTORIA: HMAS Cerberus, Westernport VIC 3920. Telephone: (03) 5950 7853.

TASMANIA: Cadet Liaison Officer, Naval Support Office, Anglesea Barracks, Locked Bag 3, Hobart TAS 7001. Telephone: (03) 6237 7240.

AUSTRALIAN CAPITAL TERRITORY: Commanding Officer, TS Canberra, HMAS Herman, Canberra ACT 2600. Telephone: (02) 6280 2762.

NORTHERN TERRITORY: Cadet Liaison Officer, HMAS Coonawarra, PMB 11, Winnellie NT 0821. Telephone: (08) 8980 4446.

THE NAVY

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GPO Box 1719, Sydney NSW 2001
The Greycliffe Disaster

Pacific 2004 in Review

Vale STALWART

Power Projection and The Royal Navy

Australia's Leading Naval Magazine Since 1938
HMAS SUCCESS with Heard Island in the distance during a recent operation in the Southern Ocean with the Anzac class frigate HMAS WARRAMUNGA.

The Tasmanian built HSV-2 SWIFT high speed catamaran in the Atlantic Ocean heading towards the US Navy's Norfolk Naval Base. SWIFT is now armed with a medium calibre gun on the bow and has a hangar for two embarked Seahawk sized helicopters. (USN)
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AUSTRALIA AND THE UNITED STATES - A PERSONAL VIEW

In recent years a few subjects have received more attention than the Australia - United States relationship. This could be thought curious given the fact that the friendship existing between the two nations had seldom if ever been seriously quenched; it was simply taken for granted.

A national defence policy loosely linking the two countries, ANZUS, was supported politically and in the wider community and provided backing for the much closer, working relationship that had existed between the American and Australian armed forces since 1942. Even a flurry when one of the ANZUS partners - New Zealand - withdrew from the alliance resulted in incoherence rather than lasting harm to Australia's defence arrangements.

In 1985, although involved jointly with Britain in “counterterrorism” in SE-Asia at the time, Australia further committed its navy, army and air force to combat alongside America in Vietnam and again in 1990, with the dispatch of three RAN ships to the Middle East, to what became known as the First Gulf War. The Vietnam involvement, seen as a move against a perceived communist threat, began with public support but became controversial following mounting casualties and doubt in both the USA and Australia about the likelihood of achieving the aims of the engagement: The Gulf War, prompted by Iraq's invasion of Kuwait, was endorsed by the United Nations and generally supported in Australia. While Australia maintained a military presence in the Middle East after the Desert Storm campaign ended (as part of a naval force blockading Iraq) with little or no comment, the assault on Iraq in 2003 by a coalition led by the United States and including Australia, lacked United Nations support and was opposed by not-to-be-discounted minorities in Australia and in some other participating countries.

Despite the occasional hiccup Australia can claim to have had no politically partisan foreign and defence policies for many years. The armed forces have had their ups and downs in terms of material requirements but even after periods of what many would regard as periods of neglect have met the demands made upon them by a succession of governments with widely recognised efficiency. It would not be in Australia's interests if an election year competing political parties deepened the rifts that have persisted since the Iraq war by attempting to score off each other with fallacious arguments and statements.

Australia's links with the United States are close and at the present time mutually beneficial; they are well known and understood by our neighbours. To either flaunt the relationship or on the other hand to create the impression of subservience can only destroy goodwill and lead to mistrust and misunderstanding. It is to be hoped commonsense will prevail.

Geoffrey Evans

Dear Sir

May I be permitted to make the following corrections/observations on the article “The Battle of the River Plate” published in the “Sail” of 19 November 2004?

The correct spelling for the raider's victim on page 13 is TAIORA, not Taira. This ship of 7983 tons gross was built in 1920 and owned by Shaw Savill & Albion Co. Ltd.

More surprising however, is that a prestigious naval magazine as THE NAVY would make such an elementary error of prefixing ACHILLIES with HMNZNS in 1939. The use of this title for New Zealand ships did not begin until October 1941 following approval by His Majesty King George VI and enacted by Order-in-Council from that date. Accordingly ACHILLIES should have been designated HNS.

Yours faithfully

David W. Finch

NSW
A Networked Navy: Networked Enabled Capability (NEC) and the Maritime Battlespace

Navies have always been more networked than the other services. The White Paper, has, however, highlighted the UK’s emphasis on network-enabled capability and operations. The equipment procurement strategies and capability frameworks for delivering this networked capability are based around three core precepts: information dominance, battlespace manoeuvre and precision effect. The network links the sensor to the shooter and enables the shooter to deliver the effect. With sensors, shooters and strike weapons, maritime forces themselves can deliver networked effect from manoeuvrable, sovereign assets in international waters, as well as making a critical contribution to the joint force campaign.

Yet as the UK looks to move from a platform-centric to a network- and effects-centred approach to procurement and operations, platforms are still needed and some of the major procurement decisions confronting the Royal Navy relate to specific platforms.

The Future Carrier (CVF)

SADR underscored the UK commitment to procuring a new generation of aircraft carrier. With the MoD and industry now close to the completion and production of the two new ships, the UK can look forward to the delivery early in the next decade of a new joint defence asset. CVF will be the principal platform for the Royal Navy/Royal Air Force Future Joint Combat Aircraft (FJCA), the short take off vertical landing (STOVL) version of the F-35 Joint Strike Fighter. The CVF Carrier Air Group will also include the Maritime Airborne Surveillance & Control command and sensor system, and will be capable of supporting joint helicopter operations (including ASW where appropriate). To maximise CVF’s flexibility, the hulls are being built to an adaptable design which may allow different JSF variants to be operated in the future.

The ships are scheduled for deployment between 2012 and 2015, with the JSF STOVL variant scheduled for 2012. Although confirmation of the ship design is expected in 2004, the final dimensions have yet to be confirmed. As a result, questions have been raised about the size of the carrier and, thus, its air wing – and then, as a result, about the affordability of the programme.

Escort Ships: the Type 45 Destroyer and the Future Surface Combatant

The purpose of escort ships is to accompany other major platforms and protect them from hostile aircraft, ships and submarines. Surface forces represent maritime power in its purest form – presence, and in both war and peace time. An escort ship is always likely to be forward-deployed to the place of the last or the next major crisis. Indeed, recently, the UK has had an escort ship deployed East of Suez over 70% of the time.

However the escort focusses traditionally distinctly ‘naval’ in its role, now faces the challenge of making a broader and more flexible contribution to joint operations and, in particular, land (and as with all assets), to operations ashore - especially since recent operations and many predicted key future scenarios have highlighted the relative lack of direct threat to the Fleet. Moreover, in the UK lessons identified from Iraq, the escort focussed ‘very rarely in any of the more positive lessons and perhaps most prominently only in a negative sense – in terms of the Royal Navy’s lack of a long-range land attack capability from the surface.

A land attack capability for the Royal Navy’s surface fleet would maximize the utility of the platform across the spectrum of operations. It would provide for the UK another option for projection power ashore, with greater weight of fire both from more platforms deployed in international waters with a military – and political footprint – which could be pushed forward or withdrawn as circumstances required. and circumstances when host nation support for land-based air was unavailable and when risk over targets to aircraft and airstream was too high. Escort platforms bring a variety of sensors to the fight, and the Type 45 in particular will bring a significant air defence capability and, in the future, options for the deployment of missile defence systems. Escort platforms also have the ability to deploy troops ashore, and to project power into the littorals with naval fire support. Yet, with no significant long range land attack capability, the Type 45 can make only a limited contribution to joint operations ashore.

With more platforms available, with such platforms likely to be pre-positioned and forward deployed to the place of the last or the next major crisis, and with each platform having to deliver greater weight, volume and regularity of fire than an SSN to shape the battlespace early on and to offer greater utility in later stages of a campaign, surface platforms fitted with a long-range land attack capability would provide more options for the joint force commander, would maximize the utility of the platform and would augment the value for money of an already-existing platform.

As a result, the opening and tactical value of such a capability in high intensity operations, as has been seen with Tomahawk’s employment in combat operations since the first Gulf War, a stand-off land attack capability has significant political, coercive influence – what might be termed Tomahawk Diplomacy. - in both war and peace time. CNN footage from the second Gulf War was filled with vivid pyrotechnics of night-time Tomahawk launches from US surface warships and powerful, distant rounds of target in downtown Baghdad. At the same time, the high political visibility of a surface warship could be augmented with this capability, forcing any potential adversary to consider that a UK surface warship steaming on the horizon could deliver significant military effect at the place and time of choice.

A potent land attack capability would significantly enhance the political and military contribution of the surface fleet to joint operations, as well as extending the sustainable presence of the escort focuss in coalition operations, giving the flotilla (in the words of Mr Hoon) ‘a greater flexibility and capability to project power on shore at a time when surface platform numbers are under threat. As the requirement for delivering strike capability ashore increases, perhaps the need is for more – not less – surface platforms. However, if escort numbers are going to be cut, it makes sense to maximise their capability and flexibility.
The Type 45 Destroyer

According to the Royal Navy, the Type 45 provides an air defence capability that is several orders of magnitude greater than that provided by the existing Type 42 destroyers, and will, in concert with the future carrier, provide the backbone of the Royal Navy's air defence capability. According to the White Paper, Type 45 will enhance protection of joint and maritime forces and to assist force projection. The Type 45 does have a requirement to service land targets. With a significantly reduced air defence threat to the Fleet, questions remain as to whether the Type 45 is a critical role without a significant long-range land attack capability. Yet, despite an extensive and highly politicised on-going debate in the UK, little or no public mention - let alone commitment - was made on the question of fitting a long-range land attack capability to the Type 45.

The first six of potentially twelve Type 45s have been ordered by the MoD. The first is due to enter service in 2007, with the second and third scheduled to be in service by 2009. Ships four to six, known otherwise as batch two, are scheduled to join the Fleet at intervals of about six months after this. The construction of batch one is under way already. As with the carrier, in meeting MoD equipment capability parameters for potential for design growth and flexibility, there is design provision to allow the hull to grow, and thus fitting a new, strike-length launcher in the forward and launcher space of the fourth ship onwards is an option. However, the windows of opportunity for a decision on such a fit are tight.

If a decision is taken to fit the Type 45 with this capability, two packages of systems are the contenders. The French-made Scalp Naval missile/AS-70 strike launcher package remains a package which is still in development, with nothing publicly about the capabilities or costs of the systems, and with in-service dates predicted for the next decade. The other competing package, the US-made Block IV Tactical Tomahawk (TacTom) and the Mk 41 (Baseline Seven) Vertical Launch System, are both the next generation in a long line of combat-proven capability. The Baseline Seven launcher is available now, and TacTom (which has successfully completed eight test firings of eight) will be available at the most cost-effective price ($50,000 per round) to the UK this year, as part of the US Navy's own multi-buy of TacTom rounds. Indeed, after the 2004 multi-buy window closes the risk is that the unit price will increase.

Perhaps the most critical window, however, relates to the hull. Realistically, the UK needs to make a decision in the first half of this year if sufficient space for a strike-length launcher is to be built into hull four onwards. While the UK is considering a decision on the launcher, it may look to defer the decision on the missile to a later stage as it looks to bring the capability into service at a time of decreasing budgets.

If the concern about the cost of rounds should remain an issue, perhaps one option is for the UK to seek a 'lead lease' arrangement with the US Navy, whereby it borrows missiles from US Navy stockpiles and pays only for the ones it uses. Given the UK pattern of use, it is likely that the UK will fire significant numbers in any future combat; however, this solution gives the UK an opportunity to defer payment (as money, alongside internal politics) appears to be the major driver of the programme.

Recent MoD studies have concluded that fitting TacTom to the Type 45 should be the first equipment capability priority for the MoD. Senior figures in the MoD also see the TacTom/Type 45 package as a major component in the UK's Network Enabled Capability. However, if this capability is to be brought into service quickly and most cost-effectively, the MoD needs to make its decision very soon. If it takes the Type 45 to year five to fit the TacTom with a long-range land attack capability, the TacTom/Mk41 package is cost-effective, combat-proven, low risk and available.

The Submarine Fleetilla: Beyond Astute and Trident

The Royal Navy's Submarine Fleetilla provides the UK's long range conventional strike capability as well as the national strategic deterrent. The best way to ensure the survivability of a military capability is to hide it beneath the surface of the sea. Nuclear-powered submarines - with their 'seven deadly virtues' of flexibility, mobility, endurance, reach, autonomy, stealth and punch - provide significant advantages in projecting power ashore, including stealth, surprise, survivability, sustainability and global reach. As Admiral Hank Chiles (formerly Commander of the US Navy's Atlantic Submarine Fleet) argued, "70% of the earth's surface is covered by submarines." Tomahawk's long range also provides coverage of the whole of the earth's surface other than one or two small mountainous regions. Four Royal Navy submarines, HMS SPLENDID, HMS TRAFALGAR, HMS TRIUMPH and HMS TURBULENT, have fired undisclosed numbers of Tomahawks in Kosovo, Afghanistan and Iraq. The UK has a proven submarine-launched Tomahawk capability.

The option to insert VLS tubes (either 16-cell VLS modules or four modified Trident SSBN tubes) into later hulls in the class as an option to fit the Type 45 with the capability packages - whether they be strategic nuclear weapons, cruise missiles or special forces. This would allow the UK to develop a generic fleet of submarines -- with a pool of 14 boats being available for SSBN or SSNs, as required, and we have the capability to further re-organize the programme to rationalize its nuclear submarine fleet at a time when questions will inevitably be asked about the ongoing affordability of such a fleet.

Conclusions

As Mr Hoon stated in briefing Members of Parliament on the White Paper, it is important to emphasize that we have been successful in recent military operations because we have always looked ahead at the capabilities we need for future challenges. The Royal Navy needs to continue to show its capability to adapt to changing threat contexts and capability requirements. However, the capacity to adapt will be affected significantly by the outcome of the Ministry of Defence's thinking on the size of the future carrier and its air wing, the capabilities of future submarines, and whether the Royal Navy can get under way with a new attack programme for the Type 45 this year. In these impending decisions, the Ministry of Defence has the opportunity to invest in the capability and flexibility of these platforms and their associated systems to provide long term capability and value for money. Money may be tight, but so too is time.
In keeping with THE NAVY's maritime focus, as we tend to dwell too much on the military side, we present an article on Sydney Harbour's worst maritime disaster. Author Steve Brew has recently written a book on the subject (see Product Review section in this edition) which goes into detail about the tragedy, the causes and the aftermath. The following is a brief summary.

Sydney Harbour's greatest maritime disaster occurred on 3 November 1927, when the Royal Mail Steamer TAHITI collided with the Watsons Bay-bound ferry GREYCLIFFE off Bradley's Head. The tragedy shocked Sydneysiders for its unsurpassed violence and dispassionate choice of victims: in mere seconds, forty people, aged from just two to 81, were swept to their deaths, while dozens more were injured.

The TAHITI-GREYCLIFFE Disaster remains the deadliest accident ever to have occurred on Sydney Harbour. Although losses were minimal in comparison to some of the more infamous maritime disasters in history, the tragedy stunned Sydneysiders because of its swiftness and horror. There was neither storm nor swell; visibility was clear and it was a fine, sunny afternoon.

GREYCLIFFE was the regular 4.14 p.m. run from Circular Quay to Watsons Bay, the northern-most suburb of Sydney's leafy Inner South Head. This particular trip was nicknamed The School Boat' because of all the city schoolchildren the ferry brought home each afternoon.

Typical of the Sydney ferries of her day, GREYCLIFFE was a wooden, double-ended vessel with a wheelhouse, rudder and propeller fitted at each end. Weathered white bulwarks ran the length of the 125-foot vessel at deck level, enclosing varnished wooden outdoor seats. These in turn surrounded segregated men's and women's saloons. Above them lay an upper deck, where both inside and outside seating were also provided. At each end of the deck stood a wheelhouse, their designs identical in every detail, except for a bell that was mounted on the port side of one.

At her wheel stood 52-year-old Captain William Barnes. He had been plying the harbour some 30 years and knew Port Jackson well. Although he had skipped GREYCLIFFE on and off for ten years, he was not her usual Master; he only took the helm when the regular Master took his days off. and today was such a day.

GREYCLIFFE departed Circular Quay and, seven minutes later, heaved to at Garden Island ferry wharf. As she came to a stop, the gangways were run out to greet the sea of brown suits and white uniforms. At this time of day, the wharf was always overflowing with Dockyard workers awaiting ferries to take them home to different parts of the harbour.

As the ferry pulled out from the wharf again, Barnes turned the wheel two points to port and increased speed. Behind him, in the distance now, the new harbour bridge was under construction. He adjusted his course again and steered towards the navigation light 100 yards north of Shark Island. Ahead of him, he could see the ferry WOOLLAHRA coming towards him from Nielsen Park on the return leg of the same route, whilst around Bradley's Head, a tug was also coming in his direction, towing a small barge.

To his rear, however, unknown to Barnes, GREYCLIFFE was also being approached by the Union Steamship Company's liner RMS TAHITI. As she moved down under construction. She passed Bennelong Point, and the ship began to increase speed as they swept past Fort Denison and approached Garden Island.

Aldwell was a Union Steamship man who had spent almost his entire career with the company. A Master Mariner who had spent over 30 years at sea, the 57-year-old Englishman was by no means new to TAHITI. He first captained her in 1910 and had been her permanent master since 1922. Nine years his junior, Scottish-born Carson had been a Pilot almost twenty years and had previously circumnavigated the globe under both sail and steam.

Built in Glasgow in 1904, the 23-year-old vessel was originally named PORT KINGSTON. When acquired by the Union Steamship Company in 1911, she was renamed TAHITI and put into the trans-Pacific passenger and mail service. Most of her luxurious furnishings were removed whilst she served as a troopship during the Great War, but she was refurbished and resumed her former role as a passenger liner in early 1920.

Carson ordered the engines be put to 'half ahead' across Circular Quay and routinely sounded the horn. He ordered 'full ahead' as they passed Bennelong Point, and the ship began to increase speed as they swept past Port Denison and approached Garden Island.

Aldwell and Carson noted the Watsons Bay-bound ferry, GREYCLIFFE, which had just departed Garden Island, running down the harbour ahead of them, a few points off their starboard bow. Off their port bow, the Circular Quay-bound ferry, WOOLLAHRA, approached from the opposite direction. The helmsman steered a roughly parallel course to take TAHITI safely between them.

Suddenly, GREYCLIFFE turned across TAHITI's path. Carson cried out in alarm and pulled hard on the lanyard in the ferry's steam horn. He barked orders to slow and turn the vessel from the impending collision, but his efforts had little immediate effect. At the speed the liner was doing, she would run several hundred feet before she would begin to turn. Let alone stop. Just moments before, aboard GREYCLIFFE, deckhand Fred Jones was busy collecting fares inside the Men's Saloon. Navy Officers and businessmen chatted together sharing the day's events, or read the newspaper while enjoying a pipe or cigarette.

Jones looked up momentarily and glanced out the saloon's portside windows. He was startled to see a large ship, barely 100 yards away, moving at a considerable speed and heading straight towards them. Immediately recognising the danger, he ordered everyone in the cabin to get out.

At that moment, two thunderous blasts exploded from TAHITI's horn. All over the ferry, passengers sprang from their seats and pandemonium broke out. Schoolgirls screamed and mothers instinctively snatched up their children. There was little time to think; people ran in every direction in a vain effort to escape the tons of steel bearing down upon them. In moments, TAHITI's sharp steel bow was abreast of the ferry's funnel, and just feet from the aft gangway. She towered over the ferry, higher than the funnel.

Up in GREYCLIFFE's forward wheelhouse, Captain Barnes had, until that moment, been unaware of TAHITI's presence. The sudden, unexpected snarl of the two horn blasts so near made him jump. Stepping across to the port side...
The Water Police launch CAMBRIA rounded Bradleys' Head at this moment heading for Circular Quay. Sp. William Shakespeare, in command of the vessel, could not believe the sight. A naked and terrified female victim, her lifejacket still on, turned to the launch and called, "I am in distress." The launch crew hauled her up and immediately ordered two constables into the water.

Passing ferries and nearby vessels rushed to the scene. The Pilot Steamer CAPTAIN COOK II was dispatched from Wavertree Bay, the Harbour Trust's steam yacht LADY HOPE-TONU was hurried over, the ferry KUMUHILA turned back from near Taronga Zoo: the ferry WOLLALAHIRA raced back from near Fort Denison; the tug BIMBI rushed over from near Garden Island and the Naval Launch SAPPHIRE diverted from its course as soon as it saw the commotion.

Many of the victims and survivors were taken to the Matron's Home at the Police Headquarters in Circular Quay. Among them were the Science Master of Sydney Boys' High School, three doctors, three nurses, and a number of police officers.

A few days later, Sydney's Lord Mayor convened a meeting at Sydney Town Hall to open the 'Greycliffe Disaster Relief Fund' for the families of the victims. £1,000 was raised, as well as £250 from the Royal Yacht Club. The money was used to provide food and shelter for those affected.

The recovery operation continued. Over the following weeks, more bodies were recovered, including a woman who ran into the water in her nightdress. The divers worked in two-hour shifts, supplied with air by men constantly employed in driving the wheels of the air pumps.

That first day, thirteen bodies were recovered. Amongst them were the late RAN Surgeon Lt-Cdr. William Paradice, NSW Chief Quarantine Officer Dr. Charles Reid, Sydney High School Science Master Reginald Wright, and housewife Mary Corby, who was found with her young daughter held firmly in her arms.

Greycliffe had taken a broad cross-section of the community to the bottom of the harbour with her. Amongst the victims were six schoolchildren, aged eleven to fifteen, and the Science Master of Sydney Boys' High School. Three doctors went to their deaths, one in the NSW Prisons Service, another the Chief Quarantine Officer of NSW, and the third a Surgeon Lieutenant-Cdr. in the RAN. Three further Navy personnel were drowned, as well as seven from Garden Island. Six holidaymakers from NSW and Victoria also met their deaths alongside Australia's first female pilot and a retired Master Mariner.

Greycliffe's passengers, one of Greycliffe's crew, one of Tahiti's crew, one of Wollahira's passengers, and two Water Police Officers. In September 1929, Water Police Sgt. William Shakespeare, who had recently died, was also commemorated posthumously for his role in rescuing Greycliffe's passengers.

In memory of the accident's victims, the 'Greycliffe Memorial Gates' to St. Peter's Church in Watsons Bay were unveiled by the Right Reverend Bishop D'Arcy Irvine on 11 May, 1929. The original gates, made of timber, no longer exist, but plaques in their memory can still be seen today on either side of the entrance.

Flash Traffic

**RAN’s Harpoons get more teeth**

The Australian Government will spend $30 million to acquire Harpoon Block II technology for its existing Harpoon missiles.

The RAN’s current Harpoon Block I missiles will be retired with state-of-the-art Harpoon Block II technology that will enhance the precision and lethality of the ADF’s main maritime strike weapon and give it a long range precision land attack capability (130km).

In ADF service the Harpoon is used from the Adelaide and Collins class naval platforms, and F-111, F/A-18 and AP-3C aircraft with the Azac’s to be fitted with the missile shortly.

The improved Harpoon allows ships close to shore, in congested waterways and even land targets to be attacked.

The combination of state-of-the-art navigational and initialisation information technology allows the missile’s active radar seeker to better discriminate the desired ship targets from islands, other obstructions or neutral ships. In the land attack mode the GPS system provides the required flight profile inputs.

The ADF has fielded the Harpoon missile capability since 1991-

The missile upgrade kits are being purchased from Boeing and will be installed by Defence personnel at the Orchard Hills facility in Sydney. An in service date has not been announced.

**Ten Aussie patrol boats for Yemen**

Australian shipbuilder Austal has launched the first in a series of 10 fast patrol boats being built for the Republic of Yemen. It is the first naval vessel launched since the company announced the formation of ‘Austral Defence’, a new division that is focused on exploiting Austal’s aluminium vessel technology in the international military and law enforcement markets.

The 37.5 metre deep V monohulls are a simplified version of the Bay Class patrol boats delivered to the Australian Customs Service in 1999/2000 and have been tailored to the customer’s operating and budgetary requirements. Powered by twin 1305kW Caterpillar V12 diesels they will be capable of 29 knots and have an operating range well in excess of 1000 nautical miles. Each vessel will be fitted with a 25mm twin-barrelled naval gun and two 12.7mm heavy machine guns and will carry three officers and 16 sailors.

Kim Gillis, ‘Austral Defence’ Vice President, said the vessels demonstrated the benefits of applying design principles from aluminium shipbuilding philosophies and practices that have made Austal an international success in the ferry building industry to the naval market

**RAN signs Surface Warfare agreement with US**

The Australian and the United States Navies have reached an agreement that will significantly assist us in the development of the RAN’s new air warfare destroyers.

The agreement is modelled on the highly successful 2001 US-UK Submarine Statement of Principles under which the Royal Australian Navy and the United States Navy have been helping each other to provide corrective, sustainable and interoperable submarine forces.

The Chief of Navy, Vice Admiral Chris Ritchie, signed the Surface Warfare Statement of Principles with his US counterpart, the Chief of Naval Operations, Admiral Vern Clark, in Washington in February.

The agreement promotes cooperation between the Royal Australian Navy and the US Navy in all aspects of maritime warfare, including the air, surface and underwater environments.

The Statement is meant to:

- Provide the RAN with support on technological development and doctrine.
- Help make the technology systems of the two navies compatible.
- Encourage more joint training exercises.
- Foster more cooperation in defence science, technology and industrial relationships to enhance the warfighting capabilities of each Navy.
- Assist with the continuing development of the Air Warfare Destroyer combat system design.
- Facilitate Australian industry involvement in USN programs such as the Littoral Combat Ship and its associated mission modules.

**Three designs chosen for SEA 4000 race**

Three international ship designers have been selected to develop concept ship designs based on existing ship classes to enable the selection of Australia’s new air warfare destroyers. This activity will lead to the selection of a preferred designer in mid-2005.

Spanish shipbuilder IZAR will produce an evolved concept design based on the Alvaro de Bazan (F-100) class frigate which is currently in service with the Spanish Navy. IZAR was selected because it has already designed an operational ship that has successfully integrated the United States’ Aegis air warfare system.

Blom & Voss of Germany will produce an evolved concept design based on the Sachsen (F-124) class frigate which is currently in service with the German Navy. Blom & Voss was selected because of its knowledge and experience with Aegis integration and a new industry flowing from the design of the very successful Azac class frigates. Whilst the F-124 utilises a European air warfare system the concept design also offered a version of the Aegis system.

Gibbs & Cox of the United States will produce an evolved concept design based on a modified version of the Arleigh Burke Class Guided Missile Destroyer (DDG-51), which is currently in service with the United States Navy. Gibbs & Cox have been selected as it was the lead ship design detail designer for the DDG-51 class and has vast experience with integrating Aegis into the design of the combat system for the new air warfare destroyers.

Consistent with the Government’s announcement last year that a United States air warfare system - the Aegis system - will form the basis of the combat system for the new ships, the Government has requested the United States to accelerate the integration of Aegis into the design concepts. This would be under the recently signed Statement of Principles between the Royal Australian Navy and the US Navy for collaboration on surface ships. Tenix and the Australian Submarine Corporation will be asked separately to assist Defence in the assessment of the designs and to advise the Government on the opportunities to maximise compatible technological and industrial involvement in the project. The Australian shipbuilders have been engaged as advisers because of their experience in the design of ship systems.

The first of Australia’s three new air warfare destroyers will be delivered in 2013. The new ships will be constructed at a cost of $4.5 billion - $6 billion.

These large ships will be capable of detecting and destroying aircraft in battle zones and protecting deployed forces from air and missile attack. This will ensure Australia’s amphibious and support ships can operate with 24-hour airborne detection and targeting.

The air warfare destroyers will also have an anti-submarine and anti-shipping capability. There is also the potential to add sonar systems to detect ballistic missiles in flight.

**Collins class operational**

The RAN has accepted ‘Operational Release’ of its six Collins class submarines.

This important milestone acknowledges the submarine’s ability to achieve defined operational outcomes laid down in Defence Preparedness documentation.

While some aspects of the Class require future rectification or modification, the Operational Release recognises that the submarines are now providing an important national defence capability. The announcement means Navy is confident in the submarine’s ability to undertake operational employment pending completion of the current set of capability upgrades.

However, the Operational Release rating does not release contractors from responsibilities to address aspects that require outstanding rectification or modification.

**GORSHKOV finally sold**

After a decade of protracted negotiations, rumours and conjecture, India and Russia have signed a deal for the ex-Soviet Navy’s modified Kirov class (Project 1143) aircraft carrier Admiral Gorkovsk.

Russia originally offered to give the vessel to India for the price of the refit needed to make it a fighter carrier, but the associated air group from Russian sources, but protracted negotiations resulted from the two countries’ failing to agree on what this should cost.
The deal is thought to be worth in the region of US$1.5 billion – has been limited to the carrier’s refit and organic air group. The refit will be carried out at the Sevmash-predpriyatiye shipyards in Severodinsk – where the carrier’s hull has been mothballed since engine fire in 1993. Following this it will go to India for final outfitting in Cochin.

Key features of the refit include a total overhaul of the engine rooms with new turbines and the removal of forward missile launchers to facilitate a 14° ski-jump to be added to the flight deck. The latter will combine with three arrestor wires to enable STOBAR (short take-off but arrested recovery) operations. Launch operations will be conducted with up to eight Ka-28 ‘Heli-K’ anti-submarine warfare and Ka-31 ‘Heli-B’ airborne early warning helicopters.

GORSHKOV can actually support an air group of 24 MIG-29s with helicopters which may see the Indian’s buy more MIG-29s. To help facilitate this Rosoboronexport - Russia’s state arms export agency - is currently holding the price of 30 more Fulcrom for up to five years for India.

The Indian Navy currently plans have GORSHKOV homeported in Karwar on the country’s southwest coast. The 45,400-vehcile’s estimated range includes Russian's state arms export agency - is currently holding the price of 30 more Fulcrom for up to five years for India.

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Two modernized submarines of the same class, CONQUISTADOR and CHALLENGER, have been in Singapore for some time and with the arrival of the other two boats will boost the numbers to four.

Indonesia to buy Dutch corvettes

The Royal Schelde Shipyard of Vlissingen, in the Netherlands, has won a contract to build two Sigma class corvettes for the Indonesian Navy.

Submarines head to Singapore

Following a complete refit at Kockums in Karlskrona, Sweden, including modernization and conversion for operations in warmer waters, two Swedish Srommen class submarines were shipped to Singapore on the back of the merchant ship DOCK EXPRESS. A third submarine is being shipped with its sister, as a reserve vessel. The two newly modernized submarines, CENTURION and CHALLENGER, have served as training vessels for the Singaporean Navy crews who have undergone training in Karlskrona over the past three years. The Swedish Navy has conducted the entire training program, which has been carried out in several stages.

File image of HNMSZ CANTERBURY.

The ship is now back at sea after a successful deployment, which is a critical part of the training project to support the Damen class modernized submarines.

The repairs were undertaken by the Damen shipyard of CANTERBURY's decommissioned sister ship WELLINGTON.

Lieutenant Commander Robert Smith, the Project Officer overseeing the repairs, said the overarching consideration of the repair project team was to ensure that the ship and the crew would be safe and the ship's electrical system fully functional. The whole project received endorsement by Lloyd's Register of Shipping who fulfilled the translator into a number of key operational benefits for the user. For example, extended ship range for a given fuel capacity, more time on station without refuelling, and reduced fuel storage requirements for a given range.

The Damen 393COR 120 crankshaft gas turbine is an integral part of the Royal Navy's long-term Marine Engineering Development Strategy, which has as its ultimate goal the implementation of 'Electric Ship' architecture in all future surface ships.

Training ship BENDIGO wins Navy League Efficiency Award

The cadets of Training Ship BENDIGO, in Victoria, were recently judged the Most Efficient Naval Cadet Unit in Australia for the year 2003.

In a colourful ceremony held in November, at Lake Weroona in Bendigo, the Chief of Navy, Vice Admiral Ritchie presented the Unit with the Navy League of Australia's Efficiency Award Shield.

In 2003, Rolls-Royce and Kawasaki Heavy Industries successfully ran the WR-21 in Japan, enabling Japanese naval decision makers to see its power performance and low part-load fuel consumption at first hand, and allowing KHI to demonstrate its capability to install and run the gas turbine efficiently in record time.

The WR-21 is based on the highly successful Rolls-Royce RB211 and Trent families of commercial aircraft engines, which have amassed more than 100 million flight hours.

It is the first aero-derived gas turbine to incorporate compressor intercooling and exhaust heat recuperation, technologies that deliver low specific fuel consumption across the engine's entire operating range.

The WR-21's advanced cycle recovers energy from the engine's exhaust gas to increase fuel efficiency throughout its operating profile. Low specific fuel consumption across the power range (a fuel burn reduction in excess of 25% on a typical destroyer operating profile when compared to conventional cycle gas turbines) translates into a number of key operational benefits for the user. For example, extended ship range for a given fuel capacity, more time on station without refuelling, and reduced fuel storage requirements for a given range.

The cadets were joined by the Royal Australian Navy Band and supported by the Australian Defence Force Cadets, Capt Gavin DOCK.
Training Ship BENDIGO has a long history in the City of Bendigo having been founded in 1952 in an old boatshed on the shores of Lake Weeroona. After several moves the cadets now parade at the new Multi-User Depot "Passchendaele Barracks" on the outskirts of the City. As an inland unit they travel long distances to participate in water activities, as Lake Weeroona is too shallow for safe boating and Lake Eppalock, some 30 km away, is in the grip of drought conditions.

There are 32 dedicated cadets in the unit and they parade each Friday evening at Passchendaele Barracks and spend many weekends away on ship visits, sailing, canoeing, power boating and surfing.

The cadets of Training Ship BENDIGO participate in a wide range of community activities both in Bendigo and away, including ANZAC Day ceremonies, SeaFare Services, Darwin Defenders, Battle of Australia, Vietnam Veterans Day, Bendigo Easter Fair parades, Australia Day Ceremonies and many others. They also willingly support the local Service clubs, in the selling of poppies and Legacy Badges.

The Navy League Award was first presented in 1959 and each year is presented to the cadet unit judged the most Efficient by representatives of the RAN. The Chief of Navy traditionally presents the shield to the winning unit.

By Patricia Ibbotson

NAURU

Until the decision to stop "boatpeople" from landing on the Australian mainland and to intern them in a number of neighbouring countries - a result of the "children overboard" claims and the TAMPA incident towards the end of 2001 - little was known about Nauru, an island state selected as one of the detention centres. Some, particularly farmers, knew it as a source of phosphate, a material invaluable as the base of fertilisers.

It so happened Nauru was the first "foreign country" visited by the writer shortly after he joined the RAN in 1941. His ship the armed merchant cruiser MANOORA, spent a month on the island after it was captured by the German raiders KOMET and ORION and had sunk a number of phosphate ships and shelled the island in December 1940 causing a good deal of damage. He was one of the few to land on the island - to visit a resident official known to his family. Nauru, a mere dot of 21sq km in the Pacific Ocean, lies only 50 km from the equator and roughly 4,000 km to the north-east of Sydney, - at the center of the Navy's former Australia Station. Before the first World War one of Germany's Marshall Islands group, the phosphate rich island surrendered to HMS MELBOURNE in 1914 and was mandated to the British Empire in 1920. Until 1948 when it became independent, Nauru was administered by Australia on behalf of Britain and New Zealand who together with Australia owned the phosphate rights, plant etc; three commissioners, one from each country, managed the phosphate business. Prior to becoming a detention centre the island had a population of slightly more than 10,000, in the main islanders and a small number of Chinese and Europeans.

Due to the depth of the seas surrounding Nauru - 600 feet quite close to the shore - the island lacks a harbour and conventional port facilities or an anchorage. To load phosphate, ships are required to secure to deep laid moorings under cantilevers and then position only during favourable weather conditions; ships waiting to load -- as many as 17 at any one time have been reported -- drift around the island, engines shut off for most of the time to save fuel but re-started occasionally to keep the island's power plant operating or to supply villages on the other side of the island. On the other hand, the island is a circular island of some 15,000 nautical miles; converted the ship would draw up to 35 feet. To facilitate conversion for military purposes (or return to commercial use), modules designed for a variety of purposes would be used, ranging from accommodation for 1,000 personnel and all facilities such as dining, recreation, medical, laundry, etc, to office and storage space. The ships would have a flight deck and a hangar deck and is envisaged they would be used for a variety of purposes including, depending on the way they were configured, command and control and replenishment-at-sea. Fully manned it is envisaged the ships would remain on station for 45 days without support.

In their balanced article the officers see possible harm to America's diplomatic efforts to win friends and build coalitions: Not all countries would look with favour on a further increase in the pre-eminent military power's readiness for prompt action and may well seek to counter the United States, in for example the United Nations. Coalition partners on the other hand might regard forward bases as a willingness by the United States to "go it alone" and reduce their own military contributions.

The officers do not specify the size of the sea-based military force but clearly, to be worthwhile it would need to be substantial and the platform of considerable size (which would seem to pose navigational and other practicability questions - GE). The author of the second article, the Vice-President of the Maersk Line, one of the world's major shipping companies, is more specific about numbers. The Maersk Line owns some of the largest containerships and the Maersk Line has a capacity of more than 6,500 20-foot containers. A length of 1,140 feet, a speed of 25 knots and a range of 6,000 miles. It is envisaged the ships would be used for a variety of purposes including, depending on the way they were configured, command and control and replenishment-at-sea. Fully manned it is envisaged the ships would remain on station for 45 days without support.

The RAN's new-construction plans are not nearly so ambitious as those of the USN or does a similar requirement exist; nevertheless the way in which it is planned to increase the use of commercial vessels for naval purposes will no doubt be watched with interest.
The Biennial RAN Sea Power Conference, part of the PACIFIC 2004 International Maritime and Naval Exposition, was held at the Sydney Convention and Exhibition Centre at Darling Harbour from 3 to 5 February.

The Sea Power Conference was run in parallel with the International Maritime Conference hosted by Engineers Australia, the Royal Institution of Naval Architects, and the Institute of Marine Engineering, Science and Technology.

At the same time some 200 firms and organisations displayed maritime exhibits in an Exposition organised by Maritime Australia Ltd in the adjacent Exhibition Centre.

Alongside the wharf outside the Convention Centre the smart new Minehunter HMAS YARRA provided a symbol of Australia’s modern and efficient shipbuilding industry, and of its Navy.

The Sea Power Conference with the theme ‘Positioning Navies for the Future’ was attended by about 500 delegates including representatives from the USA, UK, Canada, New Zealand, Papua New Guinea, Indonesia, Saudi Arabia, India, Chile and Singapore.

The opening address was given, as in 2002, by Senator the Hon Robert Hill, Minister for Defence, who concentrated in the main on the diversity of roles the RAN is now undertaking; on the naval aspects of the Defence Capability Plan; on the implications for industry, including shipbuilding, of the new program; and on the closer support arrangements with the USN.

The Minister stated that Australia must be able to project power in the littoral environment and transport and support our troops, further afield. The Government had addressed threats as they have presented and is now building a force for our troops further afield. The Government had addressed power in the littoral environment and transport and support those parts of industry that are export orientated. He needs of the Navy would not be sufficient to sustain the four Air Warfare Destroyers in the next couple of months.

The Minister stated that the Government believed that the needs of the Navy would not be sufficient to sustain the Australian industry, and that the Government was keen to support those parts of industry that are export orientated. He also announced the most welcome intention to continue the reform of the acquisition process which was part of the problem of delivering capabilities on time and on budget.

In conclusion he stated that the task of continuing to develop cut-edge maritime capabilities is essential to Australia’s security and it is a vital part of our contribution to regional and global stability.

The Sea Power and the International Maritime Conference covered a great range of subjects with many speakers, and it is not possible to cover all addresses in this article. Rather, attention has been given to a number of subjects which seemed of particular importance against the background of the changing strategic and defense scene relevant to Australia.

The keynote address for the Sea Power Conference was given by the Chief of Navy, Vice Admiral Chris Ritchie AO RAN. He outlined the Australian Navy perspective of the uncertain strategic situation including piracy, kidnapping and terrorism at sea, and the changing balance of power. The Navy faced many challenges including, as ever, to restrain costs; to monitor and adopt new technologies appropriate to needs; to train; and the problem of how to improve the personnel structure.

There were new roles and missions and the Navy will become more involved in establishing law at sea. Constabulary tasks will be a growth area. There are 60 important ports and 300 port facilities but the Navy was present in only four. A new security regime for cargoes was being introduced and much co-ordination was required with police, customs and other authorities, with Navy likely to be asked to assist at sea.

The greatest challenge was to educate the Australian people in maritime needs.
Economic development was very useful to allies. Reliance on other others and what Australia could bring to the table. A highly communication and fisheries. There was disagreement on the of piracy, hijacking, terrorism, and how to protect sea lines of the mid 1980s the Chinese Navy has changed from being a in the Asia Pacific, spoke on 'a view from South-East Asia'.

National Committee of the Council for Security Co-operation in Europe, and the Party Congress seems committed to world peace, but since the mid 1980s, the Chinese Navy has been undergoing a process of modernization and expansion. The Chinese have invested heavily in new technologies and equipment, including missile frigates and submarines. The Chinese are also expanding their capabilities in the South China Sea, where they have been involved in disputes with neighboring countries.

Part of the problem was that there had not been enough input by the private sector. One of the major issues facing Indonesia was the lack of funding for defense projects. There was a need to revise the defense budget and prioritize investments in critical areas such as procurement, research and development, and training.

The Nottingham Group for expedition warfare. The US was now creating 37 Strike Groups for expeditionary operations. The US Marines can be launched in 10 to 14 days in any area that has adjacent seas. If naval forces can seize ports and airfields, the deployment of ground and air forces can be sped up. The new high-speed vessels have dramatically changed the deployment scene. Sea-basing greatly increases the Maritime Teal to Tail ratio as the Navy provides the "soft tail". There were 5 key factors required for effective allied action - a similar expeditionary ethos; similar doctrine; effective liaison; combined training and relationships; and mutual trust.

A NEW Parallel of the RAN spoke on the technology changes. The three main components of Expeditionary Warfare; sea; shield; and sea strike were interlinked. The US was now creating 37 Strike Groups for expeditionary warfare.

RADM Connie Tay, Chief of Navy of the Republic of Singapore, outlined his littoral perspective. Singapore now faced a wide spectrum of threats from conventional to terrorism including possible terrorist attacks in the Straits of Malacca. At the same time there was exponential growth in technology. Initially the Singapore Navy had a constabulary role but in 1970s missile boats were introduced and now stealth warships and submarines were entering service. The first of six new frigates, RSS FORMIDABLE, is equipped with Harpoon anti-ship missiles, serves as a missile and patrol ship. The new 24 Swedeclass submarines have a new power and dimension to the Navy. Endurance Class LSTs added a significant deployment capability. There was close coordination with Police, Coastguard and military authorities and with the Army and Air Forces, together with regional co-operation with countries such as Indonesia and Japan.

The Indian experience covered technology, integration, and self-destruction. It was given by Mr Rahul Roy-Chaudhury of the International Institute for Strategic Studies in London, and a specialist on Indian naval and maritime security issues.

The Indian Navy now had 35 principal combatants with 40 warships and submarines. The Navy had 40 years experience with aircraft carriers and 37 with submarines. Following arm embargoes, difficulties in war with Pakistan and the 1962 war with China, foreign exchange problems and cost, India had become wary of foreign sources of supply, and embarked on a major programme of domestic sourcing.

The 1990s saw the beginning of the Delhi Class with Indian or.horizon Class DDGs. 24 Fast Coastal Patrol Boats and new frigates. Four LSTs, four APs, four patrol boats, four frigates were being obtained from the Dutch Navy.

Captain Gerard Lathour of France spoke of the shifting defense posture from the defense of national territory and the NATO Alliance to a force projection capability outside French borders in joint operations and ad hoc coalitions. France would preserve its nuclear deterrent, which was the heart of national defense, and retain its influence in alliances. The French Navy had been reduced in personnel to 56,000 and there was much emphasis on reducing ships' crews, while multi-cruising in submarines. A second aircraft carrier, either a sister-ship to CHARLES DE GAULLE or a copy of the British designed vessel would be built. The fourth ICBM submarine with the new M51 missile would be in service in 2010. Naval long-range cruise missiles would be fitted in frigates and submarines. CHARLES DE GAULLE had operated off Afghanistan successfully for seven months and had also done a six month deployment in the Indian Ocean.

A new amphibious group was being formed based on the LHDs TONNERRE and L'AMIRAL DE GRAUDE. Six new nuclear attack submarines of the Barracuda Class, 17 new frigates, four Horizon Class DDGs, 24 Fast Coastal Patrol Boats and new helicopter support systems would be coming into service over the next eight years.

Captain Richard Town MSM CD reported that the Royal Canadian Navy had increased its tempo in recent times and had already provided 17 deployments to the Gulf. Personnel strength was now down to 8,500 men.

Aria's security depended largely on friendship with others and what Australia could bring to the table. A highly capable Navy was very useful to allies. Reliance on other others and what Australia could bring to the table. A highly communication and fisheries. There was disagreement on the of piracy, hijacking, terrorism, and how to protect sea lines of the mid 1980s the Chinese Navy has changed from being a in the Asia Pacific, spoke on 'a view from South-East Asia'.

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The Commander of the US Third Fleet Vice-Admiral Michael J McCabe USN spoke on the changing maritime scene with terrorism likely to move into the littoral areas where 70% of the world’s population live and there were 4,000 ports requiring security.

The US Defence forces faced major financial problems trying to cope with requirements on only 2.9% of GDP. Some 65% of the Navy’s current activities and there was an urgent need to replace aged equipment.

Deployment patterns have now changed and the USN has developed a faster response to crises with a better logistic structure.

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The Australian Chief of Navy, Vice-Admiral Chris Ritchie, summed up the Conference and announced the probable theme of the 2006 Conference as ‘The emerging maritime security environment, threats old and new’.

The Vice-Chief of the Australian Defence Force, Vice-Admiral Russ Shalders, outlined two key challenges for Australia for the future – the development of a capable Force Structure, and people. There was a balancing act between current and future capabilities. Australia was spending $16 billion this year on defence, 75% of which went to maintaining the current force. The question was ‘is the balance correct?’

In the next 10 years the RNZ will upgrade frigates and submarines while introducing new support and amphibious vessels. The personnel problem was improving with better recruiting and retention rates.

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THE INTERNATIONAL MARITIME CONFERENCE

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Cockatoo Island on 23 June 1964. Built to commercial capability to supply and repair the new weapons then entering eastern Australia. The ship was also to be fitted with the distances from established bases and dockyards in south-areas which, in the 1960s, tended to be at considerable base for the support and repair of the destroyers and frigates received an order to construct an Escort Maintenance Ship for the RAN. the Tartar and Seacat anti-aircraft missiles

On 19 February 2003, the passenger ship TARA II arrived at the shipbreakers at Alang in India. This final arrival marked the end of the career of a ship that remains the largest naval vessel yet fully designed and constructed in Australia.

In September 1963, Cockatoo Dockyard in Sydney received an order to construct an Escort Maintenance Ship for the Royal Australian Navy at an estimated cost of £5.3 million. Designed in Navy Office in Australia, the new ship was intended to serve as a floating workshop and advance-base for the support and repair of the destroyers and frigates of the RAN. This support could be provided in operational areas which, in the 1960s, tended to be at considerable distances from established bases and dockyards in south-eastern Australia. The ship was also to be fitted with the capability to supply and repair the new weapons then entering service in the RAN, the Tartar and Seacat anti-aircraft missiles and the ASW Ikara missile.

In addition to construction, Cockatoo Dockyard was responsible for much of the detailed design and working drawings. The keel for Ship 221 was laid on No 1 slipway at Cockatoo Island on 23 June 1964. Built to commercial standards the ship’s hull was mostly welded, although the frames were riveted to the shell. Ship 221 was named STALWART and launched by Lady Casey, the wife of the Governor General, on Friday 7 October 1966.

The new STALWART was the second of the same in the RAN, the first 355 tonne destroyer presented to Australia by Britain with four sister ships in 1919. Commissioned in 1920, STALWART (I) was paid off and laid up in 1925. She was sold for scrap in June 1937 and her stripped hull was subsequently sunk off the coast near Sydney, complete with a load of rotten onions that subsequently floated ashore to pollute Bondi beach.

Fitting out of the new STALWART continued during 1967 with contractor’s sea trials off Sydney between 27 November and 4 December 1967. She was handed over to the RAN at sea on 8 February 1968, and commissioned the following day under the command of Captain G.V. Gladstone DSC RAN.

The ship was fitted with a large flight deck and a hangar to accommodate a Wessex or, later, a Sea King helicopter.

As completed, STALWART had an armament of two Bofors 40/60 Mk 5 mountings, and was fitted for, but not with, two launchers for the Seacat short-range anti-aircraft guided missile on No. 04 deck forward of the bridge. During construction, fitting out of the intended facilities for the storage and maintenance of guided missiles was deferred, and later abandoned. This resulted in some large void spaces forward on No 2 and 3 decks and a significant compensating quantity of solid ballast.

Despite these changes, the capability of the new ship was impressive. She could provide steam (provided by a boiler built during World War II and originally to be fitted in a cancelled River-class frigate), electric power, fresh water, compressed air, telephone and tank-cleaning and boiler-cleaning services. A hospital with operating theatre and dental surgery was fitted. Workshops included a smithery, plate, coppersmiths and plumbers shop; a torpedo workshop; instrument repair facilities. She carried spares for attended ships and technical information and drawings for ships in her care. She even had a chapel which also served as a conference room.

Like so many ships of the RAN, STALWART carried out many tasks, not all of which were intended when she was designed. In addition to providing support to the guided missile destroyers PERTH, HOBART and BRISBANE, and the River-class destroyer escorts. STALWART monitored mineweepers and later the guided missile frigates. She became flagship of the Royal Australian Navy and participated in many exercises in Australian waters and the western Pacific. Her excellent facilities proved a major asset in the aftermath of Cyclone Tracy in Darwin in 1974, when she assisted the devastated city in company with other ships of the RAN. December 1985 saw her chartered by the Australian Antarctic Division to resupply Macquarie Island when the usual supply ship NELLA IAN was beset by ice in waters further south.

HMAS STALWART spent much of her time secured stern-to the eastern shore of Garden Island Dockyard as she fulfilled her role in support of the ships of the fleet. This regular presence earned her the nickname of Building 215 (after her pennant number), a sobriquet that did not do justice to her considerable capability and adaptability to the various tasks she was called upon to undertake.

By the 1980s some of the original justification for the destroyern tender no longer existed. The establishment of a major base in the west at HMAS STIRLING and improved support facilities in northern Australia, particularly in Cairns and Darwin reduced the need for such mobile facilities in Australian waters. Recent RAN deployments have shown however that a capability like that of STALWART can be immensely useful, and it is interesting to speculate how she might be used today. We can expect to see a good deal of her capability incorporated in the new ships planned to replace HMA ships TORUK, KANIMBILA and MANOORA.

HMAS STALWART was paid off in Sydney on 9 March 1990. On 3 May 1990 she was sold and slightly later sailed to Greece to begin a new career as a Mediterranean passenger ferry. Re-named HER MAJESTY M she was operated by Marlines S/A in services between Greece, Italy, Turkey and France. She was renamed TARA II in 1999.

The launch of the escort maintenance-ship STALWART in October 1966. STALWART remains the largest naval vessel designed and constructed in Australia. She had an air-conditioning system, space-cabin, and a sewage treatment plant which made her attractive for sale as a cruise ship after her RAN career (RAN)

Classification as a destroyer tender, STALWART had a standard displacement of 10,690 tonnes and a full load displacement of about 15,250 tonnes. She was 156.21 metres long overall, with a beam of 20.45 metres and a depth of 11.8 metres. Main propulsion comprised two Scott-Slater 6RD68 direct-drive diesel engines with two 4.54 m fixed-pitch propellers. Her designed maximum speed was 20 knots. Air-conditioned accommodation, spacious and comfortable by the standards of the day, was provided for a ship’s company of 395 officers and men. STALWART was the first ship in the RAN to be fitted with a sewage treatment plant.

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Hatch

**NUSHIP PERTH**

Australia's $7 billion (current prices) investment in the 17-year ANZAC class frigate project has reached an important milestone with the launch of the 10th and final ship.

NUSHIP PERTH was launched at Tenix's Williamstown shipyard in Victoria on 20 March 2004 by Margaret Gee, daughter of the late Able Seaman First Class Allan Gee who survived the sinking of HMAS PERTH I.

Minister for Defence Senator Robert Hill who attended the launch said at a press conference after, "I want to take the opportunity to congratulate Tenix and all of the subcontractors, the employees. This has been a fantastic project and it's another great day today to see the last of the series - the ANZAC series - launched. The project has been delivered on time, on budget and on capability. So it's a real credit to all who have made that... all who are responsible for those achievements. And I think it demonstrates what Australian industry can do in this highly sophisticated area."

Senator Hill went on to say that PERTH would be equipped with the latest communication, navigation and fire control systems when it is delivered in June 2006.

PERTH will be capable of firing the ESSM (Evolved Sea Sparrow Missile) from its 8-cell MK-41 VLS (Vertical Launching System) and will be armed with a Mk-45 Mod 2 127mm (five-inch) gun. PERTH will have an upgraded Combat Management System - the first ship of its class to have this system fitted.

The idea for the ANZACs was first raised by the 1986 Dibb Review, which, in the most part, was turned into the 1987 Defence White Paper. In that document a call was made for eight Tier 2 frigates that would have long endurance but conduct most of their duties within fighter range of a friendly airbase, thus not needing an extensive weapons array. The FFGs would form the first tier in this FORTESS Australia model. Two ships were short-listed, the German MEKO 200 and the Dutch M class with the MEKO being successful.

Following the formula set out in the White Paper of Tier 2 ships operating under fighter cover the philosophy of "fitted for but not with" was formed, although this was later modified to "space and weight provided for but not fitted for". This philosophy also saved money. However, since the launch of the first ANZAC class frigate ships of the class have operated in the Southern Ocean on fisheries patrols, the Persian Gulf enforcing UN sanctions and even provided gunfire support to Royal Marines during 'Operation Iraqi Freedom', basically not what they were envisaged for.

The class are due to get a weapons upgrade in the near future to alleviate their lack of real combat capability. The upgrade will consist of a second fire control channel, Harpoon Block II missiles, a second anti-aircraft/missile point defence system, mine avoidance sonar, towed sonar array and the Super Sapsprite helicopter with the Penguin IR guided anti-ship missile.

Ten ships in total have been built in Australia from a planned/hoped 12 as new Zealand failed to take up the offer of another two frigates. They stand as a shining example of Australian planning, construction and ingenuity. Let's hope that the skills that have been learnt building these fine ships can be harnessed and not lost as future warships built in Australia can have a magnificent start at life.

**PRODUCT REVIEW**

**FAR HORIZON**

By Tony Park

Pan Macmillan Australia

RRP $30.00

Reviewed by James Richards

The author's obvious adoration for the people and animals of Africa also adds significant authenticity to his hero's journey, instilling his novel with local knowledge acquired through years spent travelling and learning the culture, history and customs of the African continent.

Yet it is during the evenly paced hunting scenes where Park defines himself as an author to watch. His sense of timing is excellent, slowly building the tension of the hunt and bringing the reader into the violent single-shot world of the professional game hunter.

While many of his second tier characters badly fall into the background and at times are indistinguishable from one another, Park maintains a clear understanding of his heroes' and villains' motivations, giving them credible histories and engaging back stories.

As a first time novel, Far Horizon has broad appeal to Africa enthusiasts, readers of the action genre and those demanding a story featuring a respectful representation of the Australian Army Officer.

At times simultaneously entertaining, sexy and violent, Far Horizon is an excellent debut. Let's see where Park can take us next.

**ROYAL NAVY ESCORT CARRIERS**

By CDR David Hobbs MBE RN (Retd)

Maritime Books, UK

ISBN 090777119-8

www.navybooks.com

Also available from the Australian National Maritime Museum in Sydney.

Reviewed by Lionel Hutz

First time author Tony Park's Far Horizon is an entertaining action adventure novel set in the wilds of Africa.

Featuring a soldier's quest to avenge the death of his girlfriend at the hands of ruthless poachers, Park's story opens in the heart of Mozambique, with leading man Australian Army Major Mike Williams clearing landmines for the UN and considering retirement.

Within pages, the slaughter of an African village and a violent gun battle tear Mike's world apart. The story then skips ahead two years, to find Mike has quit the Army and is driving an Overland tour bus through the sites of South Africa, entertaining backpackers and living a low-key existence after his staggering loss.

When he receives news of the return of the big-game hunters responsible for his lover's death, Mike uses his military training and Overland identity to track the killers and exact his revenge.

Using short staccato sentences to cut between characters at a rapid pace, Park handles his story's action sequences with verve, playing his scenes with effective pacing, and making the most of his chance encounters and near-loss experiences between heroes and villains.

Park also draws upon his own life and military experiences serving as an Australian Army Officer in Afghanistan during the recent War on Terror campaign, to make his hero a believable multi-dimensional character who is just as flawed as he is heroic.
In the autumn of 1940 Winston Churchill announced his Battle of the Atlantic directive. In this he gave top priority to the defeat of the U-Boats and a series of important decisions and announcements followed. The need to fill the mid-Atlantic gap (the area that land based aircraft could not cover due to range from airbases) was crucial. With necessity being the mother of invention the escort carrier evolved. The escort carrier was a large merchant ship modified to resemble a conventional aircraft carrier but with only rudimentary flight deck, arrestor wires and servicing facilities.

The arrival of the first escort carrier into the Battle of the Atlantic was so poignant that the German U-Boat head, Admiral Karl Donitz commented in his diary "Small fast aircraft circled the convoy continuously, so that when they were sighted U-Boats were repeatedly forced to submerge or withdraw. The presence of the enemy aircraft prevented any proteacted shadowing or homing by German aircraft. The sinking of the aircraft carrier is therefore, of particular importance to future convoy action".

Apart from convoy escort duties these small carriers also engaged in combat operations against ships and land targets. But for the most part were relegated to ferrying aircraft (up to 90 aircraft at a time could be transported in the latter designs) as well as training platforms to reinforce the training burden on the larger and more important fleet carriers.

If the escort carriers covered in David's book actually made it to Australia with images of the ships in Australian ports contained in the book.

David’s book goes into the history of each of the RN’s escort carriers, from build to disposal, with at least 200 images per carrier. While the information contained in the book is extremely valuable it is a bit short, due to the number of carriers covered, but will provide clues to further areas of research.

As an antidote to the US flag-waving, chest-beating Hollywood shine while simultaneously taking the opportunity to contribute to a growing call for world powers to take a more proactive role in assisting countries afflicted by militant rule.

In the story of Tears of the Sun we see a mission to extract a foreign doctor from an African village, a mission which we highly recommend.

His decision has significant ramifications not only for his own SEALs team but also for the doctor, ably portrayed by Italian screen sire Monica Belluci, and the local villagers who must learn to start fighting for their freedom.

Tears of the Sun works hard to find a balance between embracing its Hollywood shine while simultaneously taking the opportunity to contribute to a growing call for world powers to take a more proactive role in assisting countries afflicted by militant rule.

Featuring an excellent transfer and successful use of surround sound, Tears of the Sun on DVD looks and sounds great. The DVD also provides a making of documentary, an interesting walkthrough map of the film’s setting and several trailers.

In an attempt to answer many of his critics’ views on the lack of subtlety in the film’s storytelling, the DVD also features an excellent commentary track from director Antoine Fuqua. Throughout the commentary Fuqua takes considerable time to explain why he chose the film and is unapologetic for its glaringly preachy moments.

While Tears of the Sun often struggles under its own weighty subject matter, it is extremely well made, entertaining and occasionally highly engaging. It is also good to see Bruce Willis back in the saddle and taking a significant step towards reclaiming his former glory as the all-American hero. He’s obviously taken his own character’s advise and decided to “cowboy up.”

GREYCLIFFE: Stolen Lives
By Steve Brew
Published by Navarino Publishing
Limited First Edition 2003
210 pages
Order no:
PO Box 1275, Woden ACT 2606
telephone: (02) 6282-4602
or e-mail: streetnavam@bigpond.com
Reviewed by Mr Marc Hantsen

As an antidote to the US flag-waving, chest-beating patriotic action films of recent years, Buffalo Soldiers is a darkly intelligent and often highly entertaining showcase of the reckless underbelly of the US military during wartime.

Having been delayed from theatres following the events of September 11 and the Iraq war, Buffalo Soldiers is not necessarily an attack on the US military, but more an examination of what life may be like for many of its less committed and easily distracted troops.

The Australian Navy League, since 1900 it has remained 'The Civilian Arm of the RAN'.
The strategic background to Australia’s security has changed in recent decades and in some respects become more uncertain. The League believes it is essential that Australia develops capability to defend itself, paying particular attention to maritime defence. Australia is, of geographical necessity, a maritime nation whose prosperity depends on the security of the surrounding ocean and island areas, and on seaborne trade.

The Navy League:
- Believes Australia can be defended against attack by other than a super or major maritime power and that the prime requirement of our defence is an evident ability to control the sea and air space around us and to contribute to defending essential lines of sea and air communication to our allies.
- Supports the ANZUS Treaty and the future reintegration of New Zealand as a full partner.
- Urges a close relationship with the nearer ASEAN countries, PNG and the Island States of the South Pacific.
- Advocates a defence capability which is knowledge-based with a prime consideration given to intelligence, surveillance and reconnaissance.
- Advocates the acquisition of the most modern armaments and sensors to ensure that the ADF maintains some technological advantages over forces in our general area.
- Believes there must be a significant deterrent element in the Australian Defence Force (ADF) capable of powerful retaliation at considerable distances from Australia.
- Believes the ADF must have the capability to protect essential shipping at considerable distances from Australia, as well as in coastal waters.
- Supports the concept of a strong modern Air Force and highly mobile Army, capable of littoral and jungle warfare as well as the defence of Northern Australia.
- Supports the development of amphibious forces to ensure the security of our offshore territories and to enable assistance to be provided by sea as well as by air to friendly island states in our area.
- Endorses the transfer of responsibility for the coordination of Coastal Surveillance to the defence force and the development of the capability for patrol and surveillance of the ocean areas all around the Australian coast and island territories, including the Southern Ocean.
- Advocates measures to foster a build-up of Australian-owned shipping to ensure the carriage of essential cargoes in war.
- Advocates the development of a defence industry supported by strong research and design organisations capable of constructing all needed types of warships and support vessels and of providing systems and sensor integration with through-life support.
- Supports the concept of a Navy capable of effective action off both East and West coasts simultaneously and advocates a gradual build up of the Fleet to ensure that, in conjunction with the RAAF, this can be achieved against any force which could be deployed in our general area.
- Is concerned that the offensive and defensive capability of the RAN has decreased markedly in recent decades and that with the paying-off of the DDGs, the Fleet will lack air defence and have a reduced capability for support of ground forces.
- Advocates the very early acquisition of the new destroyers as foreshadowed in the Defence White Paper 2.
- Advocates the acquisition of long-range precision weapons to increase the present limited power projection, support and deterrent capability of the RAN.
- Advocates the acquisition of unmanned surveillance aircraft such as the GLOBAL HAWK, primarily for offshore surveillance.
- Advocates the acquisition of sufficient Australian-built afloat support ships to support two naval task forces with such ships having design flexibility and commonality of build.
- Advocates the acquisition at an early date of integrated air power in the fleet to ensure that ADF deployments can be fully defended and supported from the sea.
- Advocates that all Australian warships should be equipped with some form of defence against missiles.
- Advocates that in any future submarine construction program all forms of propulsion be examined with a view to selecting the most advantageous operationally.
- Advocates the acquisition of an additional 2 or 3 updated Collins class submarines.
- Supports the maintenance and continuing development of the mine-countermeasures force and a modern hydrographic/oceanographic capability.
- Supports the maintenance of an enlarged, flexible patrol boat fleet capable of operating in severe seas and states.
- Advocates the retention in a Reserve Fleet of Naval vessels of potential value in defence emergency.
- Supports the maintenance of a strong Naval Reserve to help crew vessels and aircraft in reserve, or taken up for service, and for specialised tasks in time of defence emergency.
- Supports the maintenance of a strong Australian Navy Cadet organisation.

The League: Call for a bipartisan political approach to national defence with a commitment to a steady long-term build-up in our national defence capability including the required industrial infrastructure.

While recognising current economic problems and budgetary constraints, believes that, given leadership by successive governments, Australia can defend itself in the longer term within acceptable financial, economic and manpower parameters.
The amphibious assault ships of Commander, Task Force Fifty One (CTF-51) come together in an unprecedented formation during operations in the North Arabian Gulf.

This marked the first time that six large deck amphibious ships from the East and West coasts of the US have deployed together in one area of operation. Led by the flag ship USS TARAWA (LHA-1), the ships are from left to right: USS BONHOMME RICHARD (LHD-6), USS KITKAP (LHD-3), USS BATAAN (LHD-5), USS SAIPAN (LHA-2), and USS BOXER (LHD-4). CTF-51 led Navy amphibious forces in the Arabian Gulf region during Operation Iraqi Freedom.

The 32 ships of CTF-51 comprised the largest amphibious force assembled since the Inchon landing during the Korean War (USN).
An aerial view of the shore establishment HMAS CRESWELL on the shores of Jervis Bay on the NSW South Coast.

Moored to the dock at the bottom left of the picture is the Huon class minehunter HMAS GASCOYNE.

Moored in the bay (from L to R) HMAS MANOORA, HMAS TOBRUK, HMNZS ENDEAVOUR, HMNZS TE KAHU, HMNZS TE MANA, HMAS NEWCASTLE and HMAS CANBERRA. The ships were taking part in the bi-lateral naval exercise 'Ocean Protector' (RAN).