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No 120

**How will the
Royal Australian
Navy Realise
the Benefits of
Network Centric
Warfare?**

**Diverse Navy – Iraq
Explosive Hazards
Awareness Program**

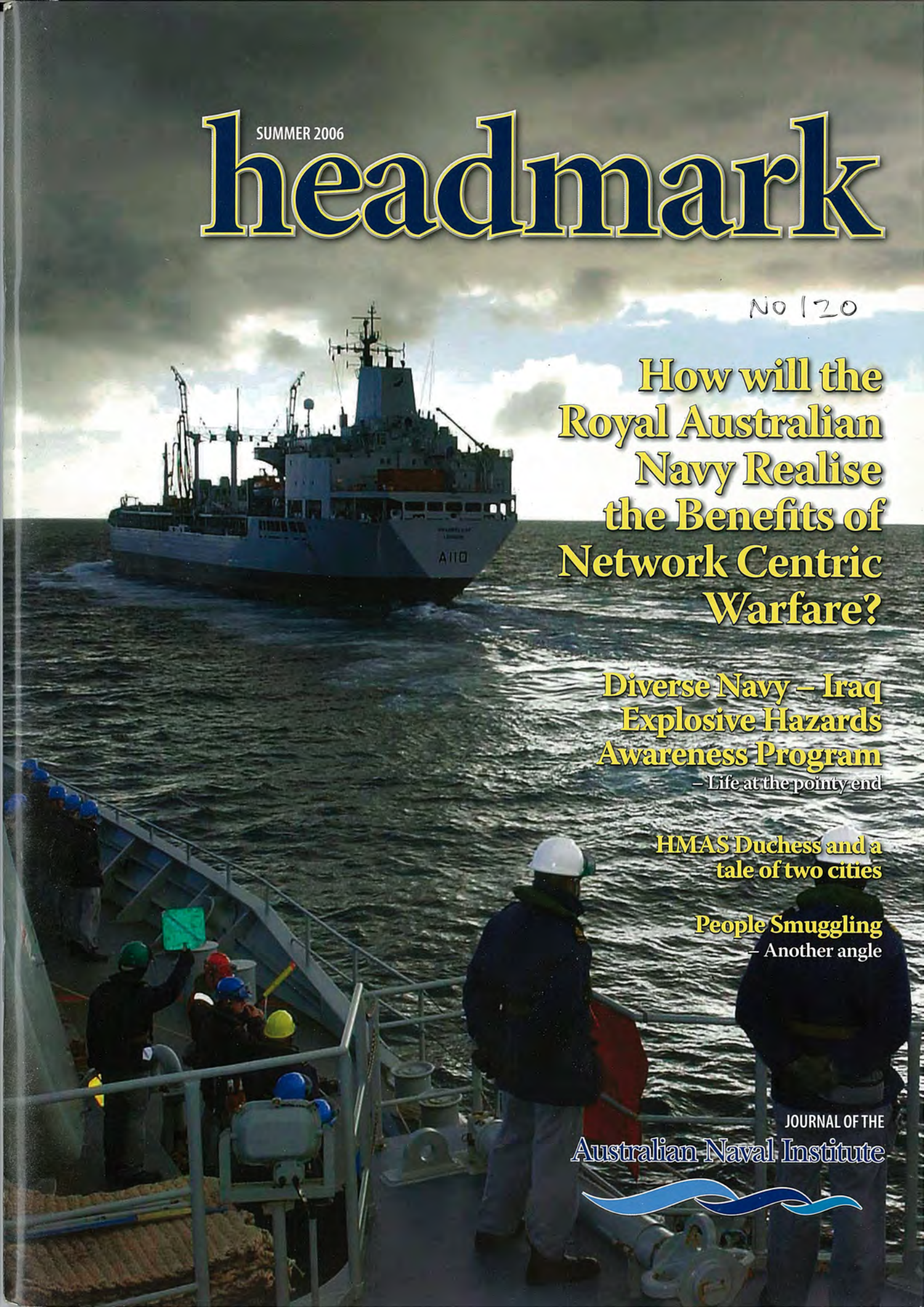
– Life at the pointy end

**HMAS Duchess and a
tale of two cities**

People Smuggling

– Another angle

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President's Message

Firstly, my thanks to all who helped make the Vernon Parker Oration and the ANI Annual Dinner such a success. John Rothwell of AO gave a lively and thought provoking presentation on his experience and that of his company AUSTAL in meeting Defence needs, both in Australia and the United States. The question time that followed indicated that his comments had provoked much thought. We hope to have an edited transcript of John's remarks available for a future issue of *Headmark*.

The Dinner was equally enjoyable. The Officers' Mess staff at ADFA did a great job and made us all feel very welcome – we are very grateful to the Commandant, Brigadier Brian Dawson, and the PMC and Deputy Commandant, Captain Peter Murray, for making the facility available.

As you will note from this edition, we continue to welcome new friends and sponsors to the ANI. We are delighted that they are onboard and conscious that we must continue the momentum that we have achieved in the last couple of years. On that point, I am in discussion with other like minded organisations, such as the Naval Officers' Club and the Naval Warfare Officers' Association, over possible shared activities, such as the discussion fora on our website, whereby the additional numbers from

combining our effort could help us achieve critical mass.

In terms of the ANI's own program, recent events have included a social gathering in WA on Saturday 25 November, organised by Captain Steve Dalton. This was a joint activity with the USI of the ACT at the Australian Defence College at Weston Creek in Canberra on 27 November. The American maritime strategist and analyst, Dr Stan Weeks, spoke on 'Transforming Maritime Forces'. Stan is always good value and was in Australia as the Synnot Lecturer for the Sea Power Centre.

All the best.

James Goldrick

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Front page
photograph:
HMAS ANZAC
approaching RFA
ORANGELEAF's Port
side to commence
the RAS-L
(Replenishment at
Sea - Liquids).
(Courtesy Dept. of
Defence)

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HMAS *Duchess* and a tale of two cities

BY TOM FRAME

The creation of the Royal Australian Navy (RAN) as an antipodean replica of the Royal Navy (RN) in 1911 reflected the intimate relationship that existed between Britain and the newly established Commonwealth of Australia. The Minister for Defence, Joseph Cook, told Federal Parliament: 'We must remember, first of all, that Australia is part of the Empire, and that within our means we must recognize both our Imperial and local responsibilities. The Empire floats upon its fleet. A strong fleet means a strong Empire, and therefore it is our duty to add to the fleet strength of the Empire.'¹ He explained that it was 'fundamental to the idea of Empire naval defence that there should be a complete standardisation of personnel and ships and equipment and that this should be to the level of the best. Only the best is good enough for any Navy in the British Empire.' The

Australian Commonwealth Naval Board (ACNB) looked to London for advice, guidance, professional expertise and trained personnel. It made sense for the fledgling Australian service to be modeled on the largest and most advanced navy the world had ever seen. But this formative period would eventually come to an end.

As the Empire rapidly diminished in size with the emergence of anti-colonial nationalist movements and as Britain's national wealth was drained by six years of bitter fighting that ended in 1945, the Royal Navy's physical presence in South-east Asia and the Pacific Ocean was steadily reduced after Germany and Japan surrendered to the Allies. In the same way that Australia had, in the words of Prime Minister John Curtin, 'looked to America' during the dark days after the Japanese attack on Pearl Harbor, the ACNB wisely sought to strengthen its relationship with those

commanding the United States Navy (USN) in the first two decades of the post-war period. With the USN assuming the mantle of the world's premier naval power during the Cold War against expansive Soviet communism, the RAN's senior leadership was conscious of the need to strengthen Australian-American maritime cooperation in the Pacific and Indian Ocean basins and was cognisant of the tangible benefits offered by the latest American naval technology.

By 1964, the RAN was in a state of transition. While the Naval Board maintained close ties with the



HMAS Duchess, probably taken in Sydney circa early 1970s prior to being converted to a training ship.





Admiralty and Australia continued to operate British-designed ships and aircraft, the Royal Navy had entered a period of contraction with whole classes of ship decommissioned without replacement. Demands for an improvement in living conditions at home meant that planning had to begin for the eventual withdrawal of UK Forces east of Suez. The Commonwealth Government explained that Australia's maritime security and the protection of international trade were intertwined with United States foreign policy and the expansion of the USN. Any residual sentimentality for things British would need to give way to strategic realities demanding a greater embrace of things American. From 1956 until 1968, the RAN's gaze gradually shifted from London to Washington.

The sinking of the *Daring* class destroyer *HMAS Voyager* after a collision with the aircraft carrier *HMAS Melbourne* off Jervis Bay on 10 February 1964 shocked the Australian people and

devastated the RAN. In addition to the deaths of 82 men and the destruction of a valuable warship, *Voyager's* loss created a serious operational problem that needed to be resolved quickly. Without a suitable short-term replacement, the RAN would be unable to fulfill its regional security commitments while Australia's seagoing capability would be depleted at the very moment the Navy was preparing for the prospect of hostilities with Indonesia. Indeed, a few hours before the collision Captain Duncan Stevens told the ship's company of *Voyager* that conflict in the archipelago was very likely before the year's end.

This article draws on previously unpublished primary sources to record the rapid progress of negotiations conducted between the RAN and both the RN and the USN to find a short-term replacement for *HMAS Voyager*. It provides an interesting snapshot of the relationship that existed between the three navies ahead of the Indonesian 'Confrontation' which began in October

1964 and the escalation of Australia's involvement in the Vietnam War after April 1965. The peculiar circumstances in which the RAN quickly acquired a replacement ship also casts light on the broader strategic context and political environment in which maritime cooperation was evolving. These highly successful negotiations reveal some very astute manoeuvring by members of the Naval Board and the willingness of the Australian admirals to exploit the tragic loss of *Voyager* to strengthen the RAN's order of battle. Had *Voyager* been lost a few years earlier or later, the replacement options would have been very different and the RAN's force structure greatly influenced as a result.

PREPARING FOR WAR

HMAS Voyager was one of three *Daring* class destroyer built in Australia during the 1950s. She had proved to be a capable, dependable and hard-working ship. After spending the first half of 1963 in the Commonwealth Far East Strategic Reserve based on Singapore,

Midships view of *HMAS Duchess* showing 'B' Turret, bridge superstructure and emblem signifying her attachment to the 10th Destroyer Squadron.

The sinking of the Daring class destroyer HMAS Voyager after a collision with the aircraft carrier HMAS Melbourne off Jervis Bay on 10 February 1964 shocked the Australian people and devastated the RAN

HMAS *Duchess* and a tale of two cities

Voyager was refitted at Williamstown Naval Dockyard during the last four months of the year. On completing her work-up, *Voyager* was due to return to South East Asia with her sister-ship *Vampire*. With the loss of *Voyager* in mid-February 1964, it seemed the best solution was to order *Vendetta* to accompany *Vampire* to the Strategic Reserve in May. HMAS *Quiberon*, which was due to pay off, would remain in commission. She would be refitted in early June at Williamstown and relieve *Vendetta* at the end of the year. This action was endorsed by the Naval Board.² Yet, the RAN was still one destroyer short of the number needed to fulfill existing operational

commitments and long-term strategic demands.

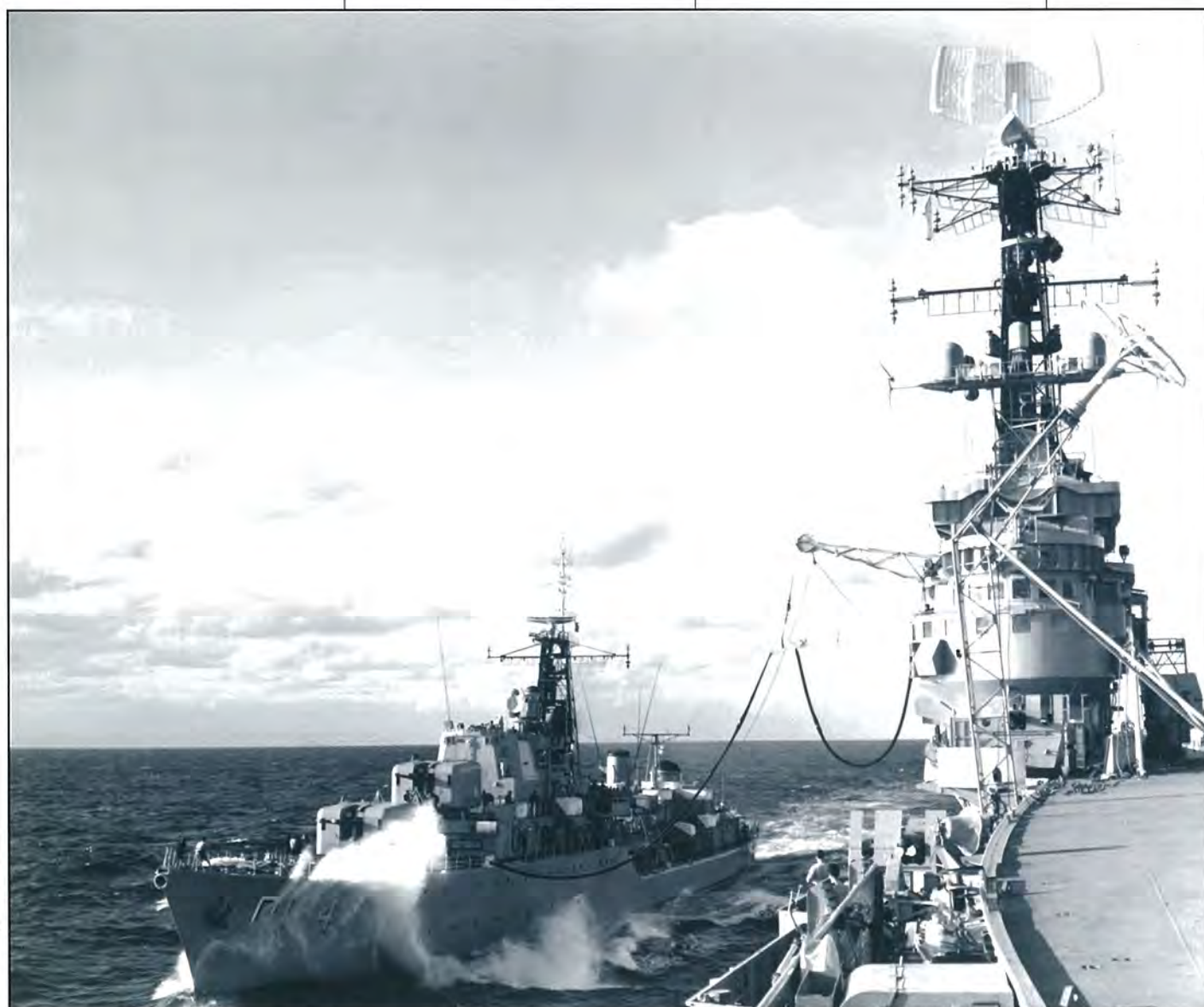
When news of *Voyager's* loss reached London early on the morning of 11 February, there was immediate consideration of how Britain might assist the RAN. On 13 February the head of the British Defence Liaison Staff in Canberra received an 'Operational Immediate' signal from the Admiralty. It read:

If put to UK Government now whilst tragedy is still strong in ministers minds, loan of a *Daring* might well be agreed and we would be more than ready to help. We should not, however, want to embarrass RAN by suggesting this if it is not what they want nor

should we wish to make firm offer until it had been put to our ministers. [The] First Sea Lord would like you to show this signal to Admiral Harrington in case he wishes to further the matter. We should fully understand if he does not want to pursue the suggestion. If he does, we will give him details of two alternative ships, and their pros and cons. The First Sea Lord thinks that we would have to work out terms in detail but we would expect them to include: a) no charge for ship herself b) RAN to accept responsibility for running costs, stores and any refits and c) no extra cost to Royal Navy.

The Naval Board responded immediately. The Australian Chief of

Replenishing from
HMAS Melbourne on
8 January 1965.



Naval Staff, Vice Admiral Sir Hastings Harrington, sent a signal to the Admiralty.

I am deeply appreciative of the offer and would be most grateful if I might have the details of the two alternative ships and their pros and cons. Knowledge of the offer is being kept within Navy Office until consideration can be given to pros and cons ... compatibility would be desired.³

The Admiralty nominated the *Daring* class destroyers *Defender* and *Duchess*. Launched in 1950, *Defender* was DC powered and without air-conditioning. The ship was undergoing a major refit in Britain and would not be ready until July 1964. By contrast, *Duchess* was badly in need of a major refit but was already in south-east Asia. Although the British *Darings* were usually refitted every two years, *Duchess* had not been refitted since 1960 and was scheduled to start a four month docking at Singapore in June 1964. Despite the absence of the more modern equipment fitted to *Defender*, *Duchess* was launched two years after *Defender*, was AC powered and was partially air-conditioned. She had been built at a cost of £A2.5 million.

Whichever ship was selected, the offer was for a permanent loan. The only additional condition was the immediate return of the ship in the very unlikely event of the Royal Navy becoming 'involved in a protracted war which did not include the RAN'. As this was considered a most unlikely contingency, the British offer was effectively a gift.

DEFINITELY A SHORT-TERM REPLACEMENT

Duchess was preferred to *Defender* for two main reasons. She was a little newer and was AC powered like the Australian *Darings*. After being laid down in July 1948 at Southampton, *Duchess* was launched on 9 April

1951 by the wife of Lord Louis Mountbatten and completed on 23 October 1952. She served in several British commands, including the Far East Fleet, where she was deployed in early 1964 as part of Britain's contribution to the Strategic Reserve. With a refit imminent, the Admiralty suggested that she could be refitted in Australia to meet the RAN's standards and specifications. It was ironic that *Duchess* should be the proposed replacement. The previous ship to bear that name, a D class destroyer built before World War II, was lost in a collision with the battleship *Barham*. More than 120 of *Duchess*' 145-man complement were lost, including her commanding officer, Lieutenant Commander R.C.M. White.

This generous offer was a product of the Royal Navy's continuing close association with the RAN. It had enthusiastic political backing in London as well. The Admiralty advised the Naval Board that:

An MP is asking in Parliament tomorrow what request we have received from the Australian Government for assistance in the replacement of Voyager. Reply will be that no such request has been received at present. Ministers are, however, aware of general contents of my [signal of 13 February] and may wish in view of this parliamentary question to make a government-to-government offer very soon. I hope this would not embarrass you.⁴

The offer of a British replacement for *Voyager* was considered from the outset to be a temporary measure. The Naval Board wanted to consider every option before committing itself to a long-term solution. This was the central argument in a paper prepared by the Naval Staff on 13 February—three days after *Voyager* was sunk.

The loss of *Voyager* has made it difficult, but not impossible to meet our



HMAS *Duchess* at sea in 1970.



HMAS *Duchess* conducting gunnery serial. 'A', 'B' and 'X' Turrets are all trained to port.



Strategic Reserve commitments in 1964 and 1965 ... While the keeping in commission of *Quiberon* does help to meet our Strategic Reserve and SEATO Exercise requirements, it does not in the short term provide an adequate replacement nor does it in the long term help us to obtain the minimum number of fleet escorts required.⁵

The RAN firmly believed it needed 20 escorts as the minimum number required for the convoy protection of military vessels.⁶ Many more would be required to secure Australia's domestic and international merchant shipping. The Chiefs of Staff Committee (COSC) had previously endorsed a figure of 16 and asked the Naval Board to justify the increased number.⁷ The Naval Board saw the loss of *Voyager* as an opportunity to renew its efforts in lobbying the Cabinet for additional



Above: Naval Crest of HMAS *Duchess*.

HMAS *Duchess* and a tale of two cities

frigates and destroyers.⁸ As plans existed for *Voyager* to undergo a major half-life refit in 1966, the Naval Board also claimed that a replacement ship would have to encompass these additional capabilities. The new equipment included the fitting of the Tartar missile system in place of one 4.5 inch gun turret, the addition of a medium-range sonar, such as SQS 23, and the installation of a new fire control system, possibly the Dutch MRS III system, for the remaining two gun turrets.⁹

The cost of fully converting a British *Daring* class destroyer as a permanent replacement for *Voyager*, which had originally cost £A6.75 million to build, was estimated at £A4-5 million. It was an unattractive option on several grounds.

There are significant differences in equipment standards between the Royal Navy and RAN *Darings* which on close examination do not make this proposal attractive ... The advantage of obtaining a *Daring* from the Royal Navy [on loan] is that it would restore the status quo more quickly, and would be the cheapest course to take in the short term.¹⁰

The Chief of Naval Staff, Vice Admiral Sir Hastings Harrington, was also concerned that the costs of an expedient short-term measure might preclude a better permanent solution. For the longer-term, Harrington had in mind the possibility of adding a further two Type 12 frigates to the existing construction program at Williamstown or even ordering an additional *Charles F Adams* class (DDG-2) Guided Missile Destroyer from the United States. Three ships of the class—*Perth*, *Hobart* and *Brisbane*—were already being built for Australia. There was also the thought of buying a single American destroyer escort of either the *Brooke* (FFG-1) or *Garcia* (FF-1040) classes.

LONG-TERM OPTIONS

In wanting to strengthen the Fleet, the Naval Board concluded that the best option was construction of a further two Type 12 destroyer escorts at Williamstown. As the Board believed the Type 12s were inferior to the *Darings*, the acquisition of two Type 12s meant the Navy would not be depleted as a consequence of the collision off Jervis Bay. In fact, it would actually emerge stronger. The two new ships would cost £9-10 million and be scheduled for completion in 1968. If this was not a practicable solution, the Board recommended the purchase of a fourth DDG at an estimated cost of £20 million. The acquisition of an American destroyer escort, either a *Brooke* or a *Garcia* class ship, would run to £15 million and was the least preferred solution. Without having examined *Duchess* too closely, the Naval Staff could not make any conclusion as to whether she should be modernised in line with the two remaining RAN *Darings* or maintained so as to make her operational life consistent with the four year loan period.¹¹ On 18 February, the British offer of *Duchess* was made formally made to the Australian Government. But by this time the United States had become involved.

AN AMERICAN INTERLUDE

During a discussion about the collision and the Navy's problems between Alan Renouf, a staff member at the Australian Embassy in Washington, and the Special Assistant to Averill Harriman, Renouf was told on 14 February that if the Australian Government wanted a prompt replacement for *Voyager* he was certain that 'the United States would be happy to loan Australia one of the many American destroyers that were in mothballs. The only cost to Australia would be that of de-mothballing.' The Australian Ambassador, Sir Howard

Beale, then spoke with the Secretary for Defense, Robert McNamara, about US Navy ships in reserve. McNamara indicated that they fell into two categories. Those best described as 'junk', and those vessels which were reasonably up-to-date and operable. Although these were part of US war plans, McNamara indicated that if the RAN wanted an immediate replacement for *Voyager*, and an application were received from the Australian Government, he would give the possibility of a ship on loan 'very sympathetic consideration'. News of this offer was received on 16 February, the day before the Naval Board submitted its views on *Duchess* to Federal Cabinet.¹²

Beale raised the matter with the Secretary of State, Dean Rusk, the following day. Rusk replied: 'Why don't we offer you one straight away instead of you asking for one. It would sound better and be a good demonstration of our solidarity as well as our sympathy'. Rather than offering a mothballed destroyer, Rusk said his idea would be to dispatch a destroyer presently on duty and to replace it if necessary with one from reserve.¹³ The Australian Government replied by suggesting that the Naval Board suspected, or rather hoped, the ship offered would be a *Gearing* or *Sumner* class destroyer. In a moment of unrestrained optimism, the Board mentioned that the offer of a DDG 'like those we are acquiring would be attractive'.¹⁴ If the ship offered were an *Adams* class DDG, the RAN would need to pay off one of the two remaining *Darings* immediately in order to train the requisite ships company. This would most probably leave *Vampire* as the only *Daring* in service (*Vendetta* being older). In the longer-term, this probably would have guaranteed her early decommissioning. In negotiating with the Americans, the Navy was pushing its luck and its

The two new ships would cost £9-10 million and be scheduled for completion in 1968.

resources to the limit. But this seemed justified given Rusk's willingness to help the grief-stricken RAN. The Australian Ambassador was also asked to ascertain the details of the loan arrangement including the likely duration of the loan and applicable logistic support arrangements.

On reflection, Harrington decided that there 'could be no question of paying off another *Daring* since the intention is to restore the situation to what it was before the loss of *HMAS Voyager*'.¹⁵ He outlined the likely Australian reaction in a memorandum prepared for the Australian Embassy in Washington.

If a DDG were offered to us it would be so attractive that it would be hard to refuse it and I would like more time to review the situation. Any other ships I consider from a naval aspect would be overall a worse bargain than say a loan *Daring* from the Royal Navy. I suggest unless there are political reasons which override the naval reasons that any ships other than a DDG be refused. If it be must be accepted than at least six months will be necessary before a trained crew can be provided.¹⁶

The American response disappointed the Naval Board. Rusk indicated that a *Gearing* or a *Sumner* class destroyer was completely out of the question. Restrictions imposed by the *US Ship Loan Act*, which was about to pass through Congress, meant that only those ships whose decommissioning was imminent could be offered on loan. Despite its own wishes, the best the United States could offer was an aged *Fletcher* class destroyer for a five year period.¹⁷ Despite its disappointment, the Naval Board agreed to consider the proposal, more for appearance sake than anything else.

While it was dealing with the Americans, both the Australian Government and the Naval Board had

hoped the Admiralty would not learn that the RAN was holding out for a better offer from across the Atlantic. In a cablegram sent to London, Menzies informed the High Commissioner: 'For your information the Americans have also made an offer which requires study. We will make every effort to reach a quick decision and will keep you informed. It is important at this stage, that there should be no mention to the British of the American offer'.¹⁸ That hope was ended by a cablegram received from London on 21 February: 'Commodore [James] Ramsey informs me that American offer is already known to Royal Navy'.¹⁹

The ship nominated by the Americans was *USS Twining*, a destroyer built in 1943. *USS The Sullivans* was also considered by the US Navy and then rejected. *Twining* was fully operational and available for delivery on the west coast of the United States from May 1964. The Naval Staff quickly estimated the cost of converting the ship to RAN standards and supporting her subsequent operation. The anticipated commitment from Australia for the provision of stores, spare parts and ammunition would be \$US1.5-2 million, thus making it far more expensive to bring into RAN service than *Duchess*. The Naval Board argued that *Twining* was, in fact, 'the least acceptable short term replacement for *HMAS Voyager*'.²⁰

The Naval Board advised Federal Cabinet on 22 February that 'from logistic, manpower and financial aspects, the choice between the two ships offering clearly points to the RN *Daring* Class destroyer *HMS*

Duchess. The Naval Board therefore strongly recommends acceptance of the British Government's offer of this ship as the immediate replacement for *HMAS Voyager*'. The Board remained adamant that *Duchess* should be considered an interim replacement for *Voyager*. It argued that she be accepted on loan for four years only, and replaced by 'modern construction escorts'. It was recommended that the Admiralty be informed of the RAN's desire to acquire *Duchess* as a temporary replacement, and that she be accepted in June 1964 before refitting and modification in Australia. The cost of refitting *Duchess* and converting her for immediate RAN service was estimated at £295-305,000.²¹

A DECISION IS MADE

The Minister for the Navy, Fred Chaney, presented the Navy's recommendation with his concurrence for Cabinet consideration on 24 February.²² The British offer was accepted the same day and the British High Commissioner advised by Prime Minister Robert Menzies of the decision on 25 February.²³ In announcing Australia's intention to accept the British offer, Menzies told Parliament that 'naval studies showed that the *Daring* class destroyer was more compatible in all respects with the RAN and would present lesser problems in regard to training of personnel, availability spares

Despite its own wishes, the best the United States could offer was an aged Fletcher class destroyer for a five year period.



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and stores and dockyard maintenance than any other replacement likely to be available.²⁴ The RAN had acquired a replacement for *Voyager* two weeks after the ill-fated destroyer had been lost. Harrington sent a personal signal to the First Sea Lord at the Admiralty: 'I am very happy that the Government has accepted your kind offer of *Duchess*. Thank you.'²⁵ A personal note was received by Harrington from the Chief of the Defence Staff in London. It read:

I was an enthusiastic backer of the idea of making a replacement for the *Voyager* available to you and was absolutely delighted when you accepted and the choice fell on the *Duchess*. The *Duchess* was launched by my wife who always took a great personal interest in her and visited her on numerous occasions, often with me. So I have a very special interest in the new addition to the Royal Australian Navy and hope that she will prove entirely successful.

THE LETTER WAS SIGNED 'MOUNTBATTEN OF BURMA'

Once the decision was made to acquire *Duchess* on loan, plans for a June 1964 refit in Singapore were cancelled. The ship arrived in Sydney on 19 April and her re-commissioning as HMAS *Duchess* at Williamstown Naval Dockyard brought forward to 8 May 1964.²⁶ After trials in Port Phillip Bay, she sailed for Sydney in November under the command of Commander Ian Burnside RAN.²⁷ *Duchess* sailed from Sydney for her first deployment to the Strategic Reserve on 19 January 1965 relieving *Vampire* on station. After a short stay in the Far East, *Duchess* returned to Sydney. On arrival in Williamstown, Burnside was informed confidentially that his ship would be required to escort HMAS *Sydney* to South Vietnam with the first contingent of Australian ground forces embarked. Over the next seven years, *Duchess* would make numerous trips to Vung Tau escorting

Sydney in addition to periodic service in the Strategic Reserve. There was never serious consideration given to returning *Duchess* to the Royal Navy after the expiration of the initial four year loan. In September 1967, the British Ministry of Defence advised that the loan of *Duchess* to Australia had been extended to 29 April 1972. Four months later the RAN offered to purchase her outright for £150,000. The Admiralty accepted. *Duchess* served in a training role before finally being paid off in October 1977.

On a recommendation from the Naval Board, Federal Cabinet approved construction of a further two frigates at a capital cost of £22 million on 13 May 1964. The ships would be built at Williamstown and commissioned in four years.²⁸ A variation to the British Leander Class design, HMAS *Swan* was commissioned in 1970, and her sister, HMAS *Torrens*, the following year. They had cost considerably more money and took much longer to be delivered than the Navy had first indicated. For the Naval Board, it was a political and organisational triumph.

A POSITIVE LEGACY

The loss of HMAS *Voyager* was a tragedy from which the RAN took years to recover. Its reputation was tarnished and morale was affected. Many years later compensation was paid to those who suffered in body, mind and spirit as a consequence of the collision. If there was any positive outcome from the disaster, it included a renewal of the RAN's corporate culture and, as this article has shown, a strengthening of its order of battle. In terms of operational capacity, the RAN made the most *Voyager's* loss. It was able to replace a tired and ageing destroyer with three ships — another *Daring* and two frigates. The RAN obtained very good service from a ship for which it only ever paid a nominal amount. HMAS *Duchess* was the last major British-built

surface combatant to be commissioned into the RAN. Had *Voyager* been lost in 1956, she would certainly have been replaced by a British ship. The possibility of an American ship being accepted would not have even arisen. If the collision had occurred in 1968, it is much more likely that the Naval Board would have pushed for an American designed replacement. By the mid-1970s when a decision was made to acquire the *Oliver Hazard Perry* (FFG-7) Class Guided Missile Frigates, a British designed ship would certainly have been resisted.

The acquisition of *Duchess* also revealed the continuation of a close and often deeply personal relationship between members of the Naval Board and the Admiralty that was reflected in government decision-making at the highest levels. While both London and Washington were moved by sympathy to offer replacements for *Voyager*, it was the strength of sentiment at the Admiralty and the compatibility of British ships with those operated by the RAN that prevailed. Of the two factors, the latter was more significant. Within a few years, neither would have mattered. *Duchess* marked the closing stages of a once close relationship and the rapid progress of a transition that would profoundly reshape the RAN and its people. 

Dr. Tom Frame is Anglican Bishop to the Australian Defence Force. He joined the RAN College in 1979 as a Junior Entry Cadet-Midshipman and served in HMA Ships *Jervis Bay*, *Derwent* and *Supply*, and the shore establishments *Watson* and *Cerberus*. He was Research Officer to the Chief of Naval Staff (1988-1990) and Staff Officer Personnel Policy, HQADF (1992). He resigned after 14 years of naval service to complete his training for the Anglican priesthood. Ordained in 1993, he held parish appointments in Australia and Britain. He is the author or editor of 19 books including *Where Fate Calls: the HMAS Voyager Tragedy*

The loss of HMAS Voyager was a tragedy from which the RAN took years to recover.

(Hodder & Stoughton, 1992) and *The Cruel Sea: the Tragedy of HMAS Voyager* (Allen & Unwin, 2005). He officiated at the funeral for Commodore Ian Burnside OBE RAN Rtd, the first RAN officer to command *HMAS Duchess*, at the Anzac Memorial Chapel of St Paul, Duntroon on 24 February 2006.

(Footnotes)

- ¹. Quoted in Colonel the Hon. J.F.G. Foxton, 'The evolution and development of an Australian Naval Policy', *Military Journal*, November 1911, p. 667.
- ². ACNB signal to all ships and shore establishments, 13 February 1964.
- ³. ACNB signal to Admiralty, 13 February 1964.
- ⁴. Admiralty signal to ACNB, 17 February 1964.
- ⁵. Staff paper 'Consequences of the loss of *Voyager* and damage to *Melbourne*' prepared for Assistant Secretary (Finance) and Director of Plans, Department of Defence, 13 February 1964, p. 1.
- ⁶. The justification for 20 escorts is set out in a 'Top Secret' Navy Office memorandum prepared by the Director of Plans, 20 February 1964.
- ⁷. Chiefs of Staff Committee minute, 20 February 1964.
- ⁸. The Naval Staff paper prepared on 13 February was endorsed by the Naval Board

at its meeting on 15 February 1964. ACNB minute 11/1964 and Navy Office file 1600/208/71 refer.

- ⁹. *ibid.*
- ¹⁰. Navy staff paper of 13 February, p. 2
- ¹¹. *ibid.*
- ¹². Department of External Affairs inward cablegram No. 422 from Sir Howard Beale to Sir Garfield Barwick received 15 February 1964.
- ¹³. External Affairs inward cablegram No. 441 from Beale for Barwick received 17 February 1964.
- ¹⁴. External Affairs outward cablegram No. 463 to Beale sent 18 February 1964.
- ¹⁵. CNS minute dated 20 February 1964 distributed to all ACNB members.
- ¹⁶. Undated memorandum from Harrington for Australian Embassy, Washington in response to External Affairs inward cablegrams Nos. 422 and 441.
- ¹⁷. External Affairs inward cablegram No. 473 from Beale for Barwick received 20 February 1964.
- ¹⁸. External Affairs outward cablegram No. 837 from Menzies to Harrison sent 20 February.
- ¹⁹. External Affairs inward cablegram No. 1069 for Menzies received 21 February. Commodore James Ramsey was the Australian Naval Representative United Kingdom (ANRUK).
- ²⁰. Cabinet submission of 22 February.

Appendix E—'USS Twining', p. 2

- ²¹. Cabinet submission on a replacement for *Voyager*, 22 February 1964.
- ²². The Cabinet had been noting progress on this matter at its meeting on 18 February (Decision No. 46) and 19 February (Decision No. 55). The minutes confirm that Cabinet believed a replacement for *Voyager* ought to be handled expeditiously.
- ²³. Cabinet minute dated 24 February 1964 (Decision No. 58).
- ²⁴. Commonwealth Parliamentary Debates (Reps), 25 February 1964.
- ²⁵. ACNB signal to Admiralty, 26 February 1964.
- ²⁶. ACNB minute 35/1964, 7 April 1964 refers.
- ²⁷. When it appeared that *Duchess* would be the short-term replacement for *Voyager*, Commander Burnside mentioned to his immediate superior in Navy Office, Captain Andrew Robertson, that he had served in *HMS Duchess* as navigator in 1956. Burnside suspects this was relayed by Robertson to the Second Naval Member, Rear Admiral Victor Smith, for consideration by Harrington. Interview with Commodore I.M. Burnside, 24 May 1989.
- ²⁸. Cabinet minute, 13 May 1964 (Decision No. 230).

HMAS Duchess at sea on 30 June 1965.
Note absence of hull number.



How will the Royal Australian Navy Realise the Benefits of Network Centric Warfare?

BY CAPTAIN MARTIN BROOKER, CSC, RAN

RAN Maritime Doctrine notes that 'the effective exploitation of information technologies will allow Australia to exploit its relatively small combat forces to maximum effect through the development of a knowledge edge and in turn decision superiority

Much has been written about Network Centric Warfare (NCW) and the benefits it offers to enhance the Australian Defence Force's warfighting capability to 'assist forces to decide what to do faster than their adversary and apply firepower with greater precision'¹. While the focus to achieve this benefit has been on linking information systems, engagement systems and sensors through networks, there is a clear understanding that the human dimension is also fundamental to NCW².

For the RAN, the concept and value of networking information between combat and C2 systems to gain a warfighting advantage has been well understood for many years. RAN Maritime Doctrine notes that 'the effective exploitation of information technologies will allow Australia to exploit its relatively small combat forces to maximum effect through the development of a knowledge edge and in turn decision superiority.'³ Recent operational experience in the Northern Arabian Gulf has reinforced this value proposition of the improved situational awareness that comes from direct



Exercise Neptune Warrior Joint Maritime Course (JMC) 052 off North West Scotland. Multi threat with 48 ships including HMAS ANZAC. On the Bridge during Action Stations is Lieutenant Trent Yates as the Officer of the Watch.

access to near real-time intelligence, surveillance and reconnaissance information from the sensing platform, and the ability to achieve seamless self-synchronisation between commanders across C2 networks that employ the latest information communications technology.

With the prospects of many new and enhanced capabilities to be delivered into the RAN over the next 10 years, that will contribute significantly to the ability to network information to enhance operational effectiveness, one is bound

to ask the question. 'Will the RAN continue to realise the benefits of NCW in these new capabilities, and what are the implications of the NCW concept that need to be considered in the RAN's approach to delivering integrated capability for the future?

IMPLICATIONS AND INTEGRATION

Like the benefits of NCW, understanding the implications that NCW will have on Defence's approach

to delivering integrated capability is well understood. Back in 2003, the Chief of Navy, VADM Shalders (in his previous role as VCDF) highlighted the implications of the NCW concept on the ADF as follows:

'NCW will have far-reaching implications for all of us in Defence—stretching from doctrine, organisation, training and future military systems. It will influence our command and control arrangements, our decision-making processes and even in the way we apply force within our understanding of the operational art. In the longer term, we are likely to train our people in different ways to take full advantage of the opportunities inherent in NCW.'

VADM Russ Shalders, Vice Chief of Defence Force,
First ADF NCW Conference, 20 May 2003

RAN Maritime Doctrine also acknowledges that the knowledge edge (ala NCW) is not only about technology but about organisation



Joint Maritime Course (JMC) exercise in the North Sea, off the coast of Scotland. HMAS ANZAC fires her 5-inch gun with the British ship, HMS EXETER (right) and the American ship, USS MCFaul in the background

There is also a need to think outside the box and incorporate design principles that will take advantage of the available and emerging technology

and doctrine; trained and educated personnel; working in a culture that fosters initiative and professional mastery⁴. VADM Shalders' comments poignantly highlight the need for clear understanding of the implications of the NCW concept with respect on how the RAN delivers capability, with full consideration of some key elements in the ADO's Fundamental Inputs to Capability (FIC)⁵. The concepts of NCW (robust networks, shared situational awareness and self synchronisation) also implies that the delivery of new capabilities will require some form of integration at both a systems and organisational level.

THE INTEGRATION PROPOSITION

The term 'integration' is used widely within Defence in many different contexts and in a wide variety of publications; intuitively there would appear to be no doubt that it is seen as desirable.⁶ But what do we mean by integration in the context of NCW? Ng, Hall, Gani and Clark in their paper in 2005 on 'Integration: Why Do It? What

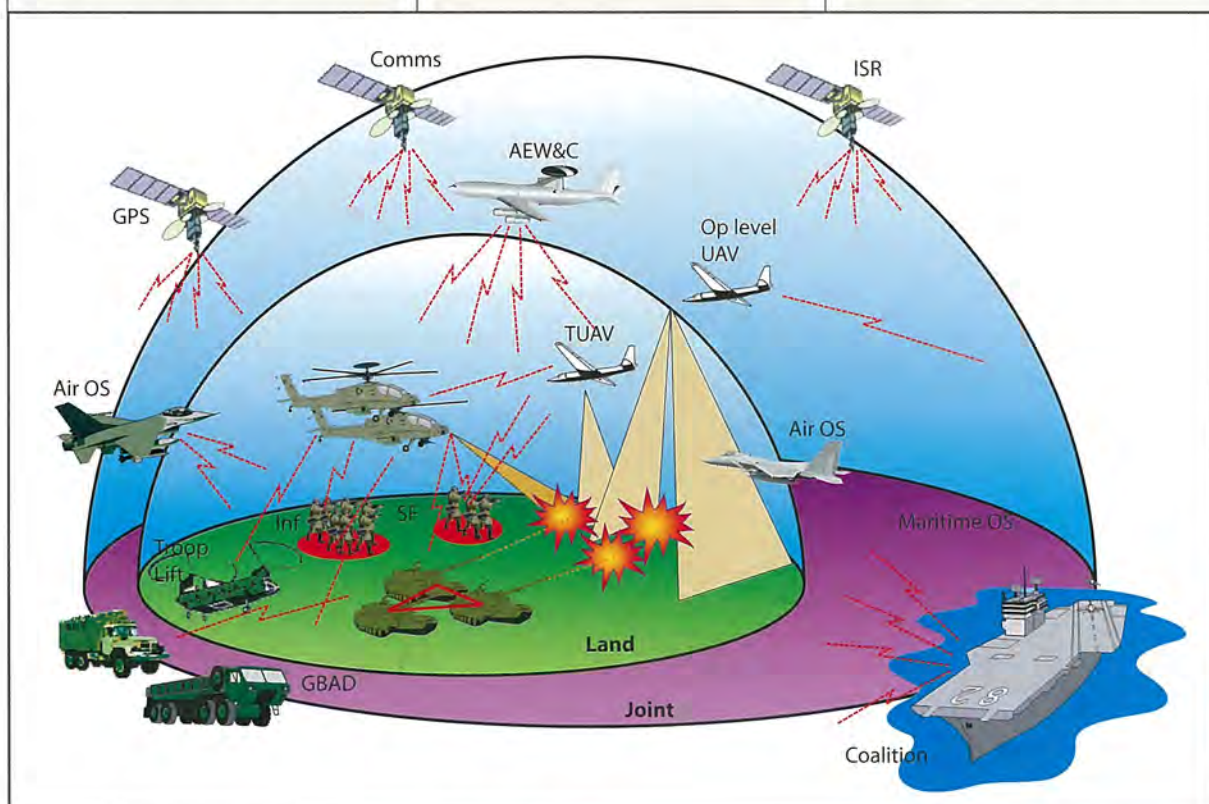
Does it Mean?' provided a number of value propositions to why integration is pertinent to the NCW concept⁷. Their paper provided a broad framework on the reasons for integration in a NCW context that can be expanded into five key areas of potential benefit:

- the improved efficiency of resources in delivering the operational effects;
- the improved coordination between entities in the battlespace;
- the increased control by commanders of those operations that have previously been independent and not always real time (ISR and Special Ops);
- the expanded scope of the force to include entities not previously available to others in the battlespace; and
- the ability to innovate and produce new solutions to old problems.

It is fair to say that the RAN has pursued NCW type integration between platforms since the first tactical datalinks were at sea to realise some of the benefits outlined above. The management of tactical datalinks and afloat information systems, the

various training programs to support these systems, the shore infrastructure (Combat Data Systems Centre and more recently the Navy Warfare Systems Agency) to support these systems in the Fleet have all been actively pursued with some vigor. Current status of the capability would indicate that Navy knows how to use tactical datalinks and C2 systems, there is access to more and more information afloat, there is a communications network infrastructure that is undergoing continual improvement to support the operational requirements, and some effort is being applied to ensure that organisational and doctrine development is supporting the operational concepts.

The opportunities that new technology will contribute to current capability, particularly against the asymmetric threats, will need high levels of interoperability between the various platforms in the battlespace to achieve synergy in warfighting effects within our own Defence Force, inter-agency and with our allies, and therefore a renewed focus on our approach to integration to



It is clear from the many new and enhanced capabilities to be delivered that the future Networked Navy will be an exceptionally complex organisation with a range of different human and machine relationships requiring careful and thorough integration.

Exercise Neptune Warrior Joint Maritime Course (JMC) 052 off North West Scotland. Multi threat with 48 ships including HMAS ANZAC. Pictured is a large group of ships positioned in the Firth of Clyde. On the left is British ship, HMS EXETER.

ensure the Navy continues to realise the benefits of NCW.

REALISING THE BENEFITS

The phrase 'keeping the end in mind' is a good starting point in thinking about realising any worthwhile goal and NCW integration is no different. Clear strategic direction is an obvious requirement in understanding what kind of capability improvements are required from NCW. The NCW Concept⁸ provides broad theoretical guidance on the ADF aspirations, and the public released Australian NCW Roadmap goes one step further to provide a number of capability milestones that will contribute to the ADF's and Navy's future NCW capability. These milestones are:

- 2008 - Broadband Networked Maritime Task Group (Initial Capability)
- 2010 - Networked Fleet (Mature Capability)
- 2010 - Integrated Coalition Network Capability⁹
- 2013 - Networked Air Warfare Force
- 2015 - Robust Battlespace Network
- 2015 - Interim Networked Joint Taskforce

The milestones are useful signposts for the ADF's NCW aspirations in terms of understanding how the RAN will realise the benefits of NCW. It is important that there is a clear understanding, among those involved

in delivering the capability, what these milestones will mean in terms of improving warfighting effectiveness, what specific tactical activities will be optimised with the technology that will be delivered in these various projects, and what cross project integration is required to ensure 'stovepipe/orphan' capabilities are not delivered.

The immediate answer to this issue is a concept of operations that will help those responsible for integration and delivering the capability (Navy HQ, CDE, DMO and NAVSYS) with the ability to develop a high-level 'System of System (SoS)' view. The SoS view will provide the various integration activities with guidance on issues which are cross-project related such as a robust network infrastructure, security architecture, quality of service and network applications. This in turn will ensure that interdependent projects make decisions where possible will reference the operational concepts and SoS design that considers both the individual capability and the joint/coalition effects. It is often the case where seemingly small decisions on projects can have significant follow-on effects for a number of other projects.

There is also a need to think outside the box and incorporate design principles that will take advantage of the available and emerging technology. This means that in developing the future force those responsible for design should, where possible, not design the future force based on today's

battlespace processes. The opportunities to experiment with new technologies, operational concepts and force design in real platforms needs to be given high priority. It is also important to properly consider legacy systems in the development of a networked force. Those involved in SoS design for the future force need to ensure that obsolescence is properly managed and that where appropriate legacy systems are integrated with new operational concepts to realise the benefits of the NCW concept.

With the end in mind considered, the next step, as outlined by VADM Shalders, is proper consideration of the implications of the NCW Concept on the FIC in delivering the capability and the benefits. The FIC framework is a well understood approach in the ADO that is used to consider what is required to generate 'capability'. While NCW is considered an enabling capability there is still great value in considering the FIC through an NCW lense to ensure that all agencies involved in delivering this capability have plans in place and have allocated the appropriate resources.

The NCW concepts and the opportunities offered by new technology implies a necessary review of organisation, doctrine, tactics and procedures to ensure that these input to capability are current and optimised to realise the benefits. Experimentation such as that that occurs in activities such as Exercise Trident Warrior¹⁰ is a good starting point and provides



excellent opportunities for Navy to 'learn by doing'. There are potentially many other activities that may also be used as experimentation opportunities. The advent of onboard training systems, networked training through the Navy CREMES program, and the Joint Combined Training Centre initiative, all provide opportunities in a busy operational environment to leverage the opportunities for the RAN to understand how it will realise the benefits of NCW.

Integration of the myriad of new major systems also requires significant effort from those responsible for delivering capability. The introduction of new combat systems, such as AEGIS, with capabilities well beyond our current experience needs innovative plans to ensure that the capability is optimised as the first available opportunity after delivery. New tactical datalinks such as Link 16 and 22 require different organisational support and operations management to ensure that they improve warfighting effectiveness rather than degrade it. As always the introduction of new capabilities has a potential for flow on in resources to support the capability from ashore.

It is clear from the many new and enhanced capabilities to be delivered that the future Networked Navy will be an exceptionally complex organisation with a range of different human and machine relationships requiring careful and thorough integration. The complexity of this integration task demands measures to mitigate the inherent risk of such a challenge. The Rapid Prototyping Development and Evaluation (RPDE)¹¹ program provides a means to identify risk early; to intervene and address risk; and ensure that NCW capability delivery is accelerated. Navy has already embarked on a number of tasks that will improve understanding and experience in networked capability in the areas of Rapid Environmental

Assessment, Expeditionary MCM and Networked Undersea Warfare. RPDE has also provided opportunities to enhance understanding of capability options for consideration by Maritime Development branch in the Defence Capability Plan. Further tasks for consideration by the RPDE program will only enhance the RAN's realisation of the benefits of NCW.

Having considered the need for well articulated operational concepts, the inputs to capability that need to be considered and the means of accelerating the Navy's introduction of NCW capability, the final step in ensuring the RAN realises the benefits of an integrated NCW capability is to ensure that the regime of operational testing and evaluation (T&E) is sufficient to validate achievements and to identify new gaps in capability that emerge in the capability delivery process. In a highly networked environment the testing and evaluation regime will also extend more to assessing interoperability of netted systems to ensure greater technical compatibility of joint and coalition systems. The ability to test this alignment through programs similar to the US Distributed Engineering Plant (DEP) Program will be essential and the appropriate organisational arrangements must be established to support this important aspect of realising interoperability and in turn the benefits of integrated NCW capability.

CONCLUSION

The value of networking information between combat and C2 systems to gain a warfighting advantage has been well understood in the RAN for many years. The NCW concept and an understanding of the benefits of integrating capability offers a renewed focus on the value proposition of NCW that will require dedicated effort to ensure that the RAN realises the benefits of improved situational awareness,

seamless self synchronisation and enhanced decision making.

Given that the RAN already has experience in integrating capability to realise the benefits of NCW, the opportunity to exploit the next generation of networked maritime forces that will be delivered through the DCP needs to focus on the fact that it is not only about technology but about organisation and doctrine; trained and educated personnel; working in a culture that fosters initiative and professional mastery.

Well developed and considered operational concepts supported by a pan-FIC approach and appropriate T&E will ensure that the RAN realises the benefits of the integrated networked capability offered through the DCP. The continued use of experimentation and activities such as TRIDENT WARRIOR and tasks in the RPDE program will also greatly contribute to the RAN 'learning by doing' as it drives towards realising the benefits NCW. 🚢

The opinion expressed in this article reflects a personnel view and does not necessarily reflect the views of the Australian Department of Defence.

Captain Brooker is currently the Director of Network Centric Warfare Development in the Australian Defence Organisation where he is responsible for the integration of Network Centric capabilities in the future force. He is a graduate of the QUT's Graduate Business School and the RAN's Staff College; and a councilor of the Australian Naval Institute.

Footnotes

¹ Enabling Future Warfighting – Network Centric Warfare ADDP – D3.1, Australian Department of Defence, 2004, p 2-2.

² *ibid*, pV.

³ Australian Maritime Doctrine, RAN Doctrine 1, Royal Australian Navy, Australian Department of Defence, 2000, p124.

⁴ *loc cit*.

⁵ The Australian Defence Organisation's Fundamental Inputs to Capability (FIC) is the standard list for consideration of what is required to generate 'capability'. The eight elements are Organisation; Personnel; Collective Training; Major Systems; Supplies; Facilities; Support; and Command and Management.

⁶ 'Integration, Why Do It? What Does It Mean?'; Simon Ng, Daniel Hall, Ruth Gani and Thea Clark; DSTO Melbourne; Paper to the 10th (2005) International Command and Control Research and Technology Symposium: The Future of C2; 2005, p1

⁷ *Ibid*, p2-3

⁸ Enabling Future Warfighting – Network Centric Warfare

⁹ Graphic developed by Dr Mark Uniwessee, DSTO Land Operations Division.

¹⁰ Exercise TRIDENT WARRIOR is a US Navy FORCEnet sea trial event that focuses on providing operational trials that delivers 'speed to capability' for warfighters. The RAN participate in the Exercise under the auspices of AUSCANUKUS.

¹¹ RPDE is a Defence and Industry Collaborative activity to enhance the ADF warfighting capacity through accelerated capability change in the NCW environment.

<www.rpde.org.au>

al Networks: The Dominance of mmunications in Maritime Operations'

NAVAL HISTORY

*...broadly considered, they
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tain A.T. Mahan, USN, 1900.

*...e control of communications,
...onquest of territory.'*

- Sir Julian Corbett, 1911.

*...up the whole world, and has
...spreading both knowledge*

C.S. Thring, CBE, RAN, 1928.

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outside analysts. Practitioners of sea power have likewise been aware that developments in strategy and tactics are closely related to the prevailing state of communications technology. But although navies are routinely at the forefront of the revolution in information management, seamless interoperability remains an elusive goal, and the extent to which force networking may have changed traditional naval roles remains unclear. By examining how the different elements of maritime communications have evolved and why perceptions have changed, this conference will use the past, not only as a subject of interest in itself, but as a guide to the future conduct of planning and operations.

PROGRAM

Various distinguished speakers from Australia and overseas will appear at the conference. The final program will emerge from the response to this call for papers, but is expected to cover the shifting demands facing both national and combined international sea power, together with case studies of command, control, communications and intelligence taken from the ancient world through to the 21st century. Gathered together, these papers will offer new insights into the future face of maritime strategy, the changing nature of global connections, and the continuing nexus between communications and command at sea.

PROPOSALS

Proposals for papers, providing an initial title and a one-page outline, should be submitted by 31 October

Sea Power Centre – Australia
Department of Defence
CANBERRA ACT 2600

or david.stevens3@defence.gov.au

A decision on proposals will be available in early December 2006. If a proposal is accepted the presenter can expect conference registration, accommodation during the period of the conference, travel within Australia and appropriate meals and incidental expenses to be covered by the conference organisers.

FORMAT OF PRESENTATIONS

Presentations at the conference are expected to last 30-40 minutes followed by time for questions. A draft of the paper must be provided in electronic form at least one week prior to the event. To be eligible for publication final papers must be submitted by September 2007.

PUBLICATION

Selected papers will be published in a collected volume. The format will be similar to previous productions of the Sea Power Centre-Australia including: *The Face of Naval Battle* (Allen & Unwin, 2003); *The Navy and the Nation* (Allen & Unwin, 2005); and *Sea Power Ashore and in the Air* (forthcoming).

MORE INFORMATION

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DIVERSE NAVY – IRAQ EXPLOSIVE HAZARDS AWARENESS PROGRAM

BY LCDR STEVE BLISS, RAN

Members of the Navy are actively embedded within the explosive hazard detection areas within Iraq. The work is challenging and hazardous. LCDR Steve Bliss presents an overview of the situation.

The Iraq Explosive Hazards Awareness Program was born from the Counter Mine Counter Booby Trap Center's Mine Awareness Training Program. The concept was adopted due to the mine threat that US forces faced in Bosnia and was seen as a necessity during pre-deployment training. It has been locked in as the way ahead for pre-deployment awareness training for future operations as well as other operational deployments that may have a mine, Unexploded Ordnance (UXO) or Improvised Explosive Device (IED) threat.

Overall, the in-theatre mine and UXO threat is medium to high. The IED threat is very high. The mine threat

extends from large-scale protective minefields, which were emplaced by the former Iraqi regime along the country's borders and within certain internal regions, to nuisance mining, both past and present, as well as the use of mines on the odd occasion as command initiated IEDs.

UXOs - both in the form of malfunctioned CF and Iraqi ordnance and unfired captured Iraqi ordnance, which is deemed to be unstable - continue to pose a theatre wide threat. The threat from IEDs - in particular, the employment of military ordnance in an IED role - is currently the most significant of all explosive hazards.

The Counter-IED Team's mission is to deliver a C-IED Program, relevant to the in-country threat, in order to provide personnel with the knowledge required to identify mine, UXO and IED indicators, as well as the skills required to respond safely to threat situations.



Marine Gunnery Sgt. Nathan L. Luther of the 15th Marine Expeditionary Unit, Explosive Ordnance Team 8, moves down range to identify the location of an IED placed along the shoulder of a busy highway in southern Iraq. (Master Sgt. Lek Mateo, Texas National Guard)



A South African-built Buffalo of the Kansas Army National Guard's 891st Engineer Battalion stands by to investigate a suspected IED that was spotted along the shoulder of a highway in southern Iraq. (Master Sgt. Lek Mateo, 56th Brigade Public Affairs Office, 36th Infantry Division, Texas National Guard)

FUNCTIONS

The primary functions of the C-IED Training Team are to:

Serve as the principal provider of in-country C-IED and Receipt Staging and Onward Integration (RSO&I) C-IED in Kuwait, as well as one of the principal providers of on-going information regarding counter mine, UXO and IED Training Techniques and Procedures (TTPs) relevant to the evolving in-theatre threat.

- Manage, review and update the existing C-IED Program, which is based on the three foundation packages Basic, Intermediate and Train The Trainer (Advanced). The levels were commonly known as, Level I, II and III prior to a change which occurred on 23 July 2006.

The levels of C-IEDs determined by Task Force TROY are as follows: