

SEMAPHORE

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AUSTRALIA'S NEED FOR SEA CONTROL

Australia is a maritime nation in the most maritime part of the world; our ability to use the sea is critical to the protection of Australia's national interests. Australia was founded not just as a penal colony but as a British naval base in the Pacific Ocean. Our dependence on the oceans, from both an economic and security perspective, has continued ever since. In economic terms, 99 per cent of Australia's international trade by volume and 75.4 per cent by value (at \$215.3 billion) was transported by sea in 2004-05.¹ These figures have increased by 5 per cent (by volume) and 8 per cent (by value) annually since 1983, with projections that the volume of Australia's seaborne trade could reach 1 billion tonnes by 2013.² Australia is the fifth largest user of shipping in the world.

As an island nation, any physical threat to Australia must come on, over or under the ocean and we must use the sea to deploy and support our armed forces, even for many deployments on our own soil – geography makes this so. Australia's neighbours are all maritime nations, many of them archipelagos. The Asia-Pacific region is one of the most dynamic areas on the globe, host to many of the world's most strategically important shipping routes and chokepoints, such as Malacca, Singapore, Lombok, and Sunda straits. For example over 60000 ships transit the Malacca Strait each year, carrying one quarter to one third of world trade, and half of the world's oil (11 million barrels daily).³ The maritime domain is critical not just for Australia's economic wellbeing and security, but also for our neighbours. In short, the continuing ability to use the sea is critical for Australia and our region.

It is widely acknowledged that 'navies fight at sea only for the strategic effect they can secure ashore, where people live'.⁴ Concepts which have evolved from the maritime strategic school of thought include 'Command of the Sea', 'Sea Control' and 'Sea Denial'. Command of the Sea is an absolute concept, which espouses free and unchallenged maritime operations by a nation, while at the same time ensuring that an adversary is incapable of using the sea to any degree. However, although the concept might be valid in a theoretical sense, practical experience demonstrates that achieving (absolute) Command of the Sea has become increasingly difficult, if not unattainable. The development of the submarine and aircraft, for example, made it clear that the value of maritime operations is in relation to the use of the sea and not for the possession of the sea itself. One does not 'own' the sea as territory in the same way that land is owned in the continental context.

Sea Control

Acknowledging the vital lessons of history and the overarching importance of strategy, the contemporary term 'Sea Control' was coined to encompass the modern realities of operations at sea, and can be defined as 'that condition which exists when one has freedom of action to use an area of sea for one's own purposes and, if

required, deny its use to an adversary'.⁵ It is a relative, rather than absolute, concept and one that may be supported by key battles, such as Matapan (1941) and Coral Sea (1942), or through prolonged campaigns, such as the convoy battles in the Atlantic (1939-45) and off the east coast of Australia (1942-43). The Japanese successfully gained Sea Control in the opening phase of their involvement in World War II with the surprise attack on the US fleet at their base in Pearl Harbour and the sinking of HM Ships *Repulse* and *Prince of Wales* in South East Asian waters. This control enabled the Japanese to maintain the initiative and facilitated their rapid expansion through Asia, culminating in the fall of Singapore in February 1942. The enduring feature in all these operations, however, was that Sea Control was transient, aiming to establish sufficient control, in a particular area, for a period of time, to enable the use the sea for each side's purpose. This use of the sea reflects the fact that the ability to facilitate maritime power projection is, in many ways, the most fundamental thing that Sea Control enables.

Sea Control is multi-dimensional in nature, as it encompasses control of the air; control of the surface of the sea, control of the undersea water column, control of the littoral (if operating in that environment), and control of the electro-magnetic spectrum. Each of these multi-dimensional aspects is important in each warfare discipline. For example, in maritime air warfare involving a credible air threat during operations in close proximity to an adversary with a viable strike capability, the absence of air power and air warfare will inevitably prevent a force achieving Sea Control. Sea Control is an essential precursor for the projection of maritime power, especially for the conduct of amphibious and sea transport operations and for the support of forces operating ashore. However, in the face of opposition it may well be necessary to continue fighting to keep Sea Control while simultaneously projecting maritime power in support of other operations.

Related to Sea Control is the concept of Sea Denial. Sea Denial may be used either independently or as a subset of Sea Control. When used on its own it can be defined as 'the capacity to deny an adversary the ability to use the sea for their own purposes for a period of time without necessarily being able to exploit the sea for one's own use'.⁶ The U-boat campaigns of both World Wars are examples of a Sea Denial strategy, as were the minefields laid by Iraq off the Kuwaiti coast during the 1990-91 Gulf War. Despite some initial success, most denial strategies ultimately fail, largely due to the one-dimensional nature of the strategy.

Once effective countermeasures to the U-boat had been introduced, for example, the Germans had no other effective method with which to continue their Sea Denial strategy. By contrast, the successful campaign waged by



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the US Navy against Japanese shipping during World War II was multi-dimensional, involving both submarine and air assets, acting as subsets of their overarching strategy of Sea Control.

The Attributes of Maritime Forces

The RAN's maritime doctrine lists the key attributes of maritime forces: Mobility in Mass, Readiness, Access, Flexibility, Adaptability, Poise and Persistence, Reach and Resilience. While obviously slower than aircraft, ships can carry hundreds or even thousands times the payload and are uniquely mobile 'in mass'. People move by air, but equipment and goods still move by sea (in both the commercial and military sense). This fundamental truism is why it is critical to be able to gain and maintain Sea Control and to keep Sea Lines of Communications open, in both peace and conflict.

Warships are self contained units and able to sail at very short notice. They carry their logistics with them and have the reach to be able to conduct sustained operations well away from shore support. Operating in task groups with dedicated supply ships, naval forces can operate almost indefinitely. Warships do not need any other nation's approval to deploy and can transit through, and access, almost all the world's ocean areas without any external approval or notification. They do not require a 'footprint' on another nations' territories or their airspace and hence do not challenge sovereignty.

Being self contained, they can poise in an area and posture to support diplomatic or other initiatives, ready to react if combat force is required. They can send a powerful message by their presence and posture or withdraw at government direction without loss of face. Without the need for forward bases, they can often be operational in theatre before any other forces, despite their apparent longer transit times. Geographical constraints, coupled with restrictions on airspace and land bases, may mean warships are the only option available to the government to achieve their objectives in many circumstances.

The Role of the Surface Combatant

Sea power is rightly recognised for its flexibility; in particular the ability of surface combatants to swiftly change their readiness between different levels of operations and apply graduated force commensurate with the situation and across the spectrum of conflict. In a diplomatic role, surface combatants make a psychological impression through their perceptible presence and powerful appearance. They have similar visibility in a policing role and possess inherent capabilities for interdiction and boarding. In higher intensity operations surface combatants combine readiness and global reach with sustainability and controllability, which can be non-invasive and easily withdrawn if required. Deployed in the protection of Sea Lines of Communications they have multi-dimensional capabilities and are essentially tools of Sea Control rather than Sea Denial. In support of land operations, surface combatants are likewise capable in a wide range of tasks including escort, bombardment, supply and, on occasion, lift – including, where necessary, evacuation. In amphibious operations, especially in conjunction with maritime air power, surface combatants can facilitate approach with manoeuvre and surprise. All these functions relate directly to Australia's national and

regional circumstances and make surface combatants essential to the central concept of Sea Control.



HMAS Melbourne firing a Standard Missile (Defence)

The modern surface combatant, therefore, retains a vital, indeed fundamental, role to play in a balanced maritime force structure. Their mobility and endurance allows the flexibility to maintain a continuous presence in moving scenes of action. Their sensors and weapons work throughout the maritime battlespace and span operations against aircraft, ships and submarines, and against forces and assets ashore. Moreover, mobile naval platforms have the ability to poise and persist in theatre, often for months at a time. The surface combatant thus remains a potent and flexible capability to execute Sea Control, particularly when they lever off other assets and advanced intelligence, surveillance fusion and dissemination systems. Indeed, the flexible response options and sustained presence of surface combatants in periods short of open hostilities may help to control or prevent escalation, particularly in complex or ambiguous circumstances where submarines and aircraft are not free to make full use of their primarily offensive potential.

Australian surface combatants must be capable of operating throughout the maritime approaches and beyond. Project Sea 4000, the Air Warfare Destroyer (AWD), will ensure that Australia will acquire and maintain a Sea Control capability into the future. Able to act across all environments simultaneously, the ships will provide a variety of capabilities appropriate to securing Sea Lines of Communications, the projection of power ashore, the provision of fire support, and the protection of friendly sea, land and air forces in the open ocean and the littoral. The mission requirement is to provide a Sea Control capability for the Australian Defence Force (ADF) and as such the AWD will form the backbone of ADF maritime operations for decades to come.

This is an updated version of Semaphore 1, 2003.

- 1 Bureau of Transport and Regional Economics, *Australian Transport Statistics*, Canberra, August 2006, table 4.
- 2 Bureau of Transport and Regional Economics, *BTRE Estimates*, <www.btre.gov.au/statistics/xls/int_freight.xls> (30 May 2007).
- 3 Chietigj Bajpae, 'Strategic Interests Pull Japan and India Together', PINR, 16 Feb 2007, <www.pinr.com/report.php?ac=view_report&report_id=618&language_id=1> (30 May 2007).
- 4 Colin Gray, *The Leverage of Sea Power, The Strategic Advantage of Navies in War*, Maxwell Macmillan, New York, 1992, p. 1.
- 5 Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 39.
- 6 Royal Australian Navy, *Australian Maritime Doctrine*, p. 39.



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