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ASW: WHERE IS THE INNER SCREEN?

by

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Submatine and antisubmatine forces are engaged in a continuing battle, with technological advances ptoviding one or the othet a ttansient advantage, likely to be offset rapidly by some appropriate countet. Two relatively recent such advancements are influencing current tactical doctrine.

The first is the vast improvement in passive sonat and associated processing systems. The effective use of these systems depends both on their being where acoustic condirions are favotable and on the opposing submarines being noisy enough to be identified from among competing sea noises. If neither condition exists, the passive system will not detect the submarine. The likelihood of detection can be influenced favorably by appropriate stationing of ASW platforms and placement of sensors to minimize acoustic interference and to take advantage of phenomena such as convergence zones.

To counter the improvements in passive detection, submarine design undergoes constant review and modification aimed at quieting the boats. When quieting programs succeed in producing submarines capable of conducting normal operations at noise levels below those found in the ocean, passive acoustic detection will have been put out of business.

A second technological advance to influence tactical doctrine is the coming of tactical missiles launched from submerged submarines. At first glance it appears fortunate for battle group planners that stationing requirements fot the optimum use of passive ASW sutface platforms closely patallel those required for defense against submarine-launched tactical missiles. Indeed, current doctrine and procedures are adequate fot the prosecution of submarine contacts developed in the passive search areas. Once the submarine has launched a missile, battle group doctrine propetly views the problem as a matter of AAW.

But there is a flaw in this neat picture, stemming from our emphasis on the use of passive systems for the detection of submarines. Typical battle group formations place the ASW platforms well out of visual range of main body ships, positioned to optimize their passive acoustic sensors. The 10-15 mile radius surrounding the main body is often left unprotected and unsearched. Various rationales are used to explain this situation, among them dispersion for deception, attempts to create targeting problems, reduction of acoustic interference, and reduced force levels.

No matter the cause, the fact remains that main body ships are generally

poorly protected from those torpedo-firing submarines that penetrate the outer passive detection systems. This situation is unacceptable, as the records of submarine warfare clearly show that *all* successful submarine attacks have been launched from the area currently lefr unsearched and unprotecred.

How to solve the problem? The least we can do consists of the following:

(1) *Make Commanders Aware:* Commanders must appreciate that defense in depth, by irs very nature of expanded defensive perimeters, creates gaps through which determined adversaries will pass. A capable inner defense is needed to prevent torpedo-firing submarines from reaching their targets.

(2) *Dedicate Resources:* Ships of the sometimes controversial *Oliver Hazard Perry* (FFG-7) class, with their associated LAMPS helicopters, could fill the void in the inner defenses of the battle groups. Close-in search in the noisy acoustic environment of the main body requires a medium power, active sonar, something which the FFG-7 possesses, and quick-action ASW weapons, which could be installed. LAMPS helicopters could augment these defenses through both visual search and radar surveillance. Four-ship FFG-7 ASW units should be assigned to each battle group.

(3) *Develop Tactics:* Close-in active sonar search and coordinated tactics between ships and helicopters should be developed as soon as possible. Urgent attack procedures based on nearly forgotten lessons learned at great expense in previous wars also need to be developed, along with supporting weapons.

(4) *Train:* Ships and aircraft should train together to develop teamwork and confidence in their capabilities to locate and counter the submarines detected near the main body ships.

In sum, despite the changes in submarine and antisubmarine warfare systems certain facts remain unchanged. Torpedo-firing submarines will seek to gain attack positions and significant numbers will succeed through either skill or luck. Dedicated ASW teams, comprised of ships and aircraft, equipped and trained for rapid active antisubmarine warfare should be established so they can "Detect, Classify and Destroy" any submarine attempting to attack main body ships.

BIOGRAPHIC SUMMARY

Now on the staff of the Naval War College, Commander Atkins has served in three destroyers and on a carrier group staff.

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