IUSS Shines in
SMART SEARCH 02

by ENS Teddy G. Tan

Undersea warfare is an important element in achieving Maritime Dominance, and this summer's undersea warfare blockbuster was Smart Search 02. This coordinated, multi-platform exercise included participation by submarines, surface ships, and maritime patrol aircraft, with a featured role for the Integrated Undersea surveillance System (IUSS).

At their consoles inside Naval Ocean Processing Facility, Dam Neck, Virginia, Petty Officer 2nd Class Armin Schevey and Seaman Lacresha Brown keep track of the OPFOR submarine during Smart Search 02.

Smart Search 02 took place over four days in mid-July off the eastern coast of the Carolinas. The exercise commenced with a simulated opposing force (OPFOR) submarine coming from the north to intercept a battle group transit and interdict a High Value Unit (HVU). The mission of the "Blue" force was two-fold - to locate and maintain track of the OPFOR submarine; and to ensure safe transit of the HVU through the battle group's operating area (OPAREA) without being compromised.

Under the control of Commander Task Force 84, various task groups, units and elements were assembled to execute this highly complex, multiplatform exercise. Playing the OPFOR - or "Orange" - submarine was USS *Augusta* (SSN- 710) with appropriate acoustic augmentation. Blue theater assets included an IUSS team composed of two Surveillance Towed Array Sonar System (SURTASS) ships - USNS *Bold* (T-AGOS-08) and USNS *Prevail* (T-AGOS-12), with embark e d military detachments (MILDETs), and the Naval Ocean Processing Facility (NOPF) Dam Neck in Virginia Beach, Virginia. Supplying land-based patrol aircraft were Maritime Patrol and Reconnaissance Aircraft (MPRA) squadrons VP-5, VP-45 and VP-16 from Jacksonville, Florida and VP-26 from Brunswick, Maine.

Tactical prosecution of the Orange submarine was assigned to Commander Destroyer Squadron TWO under Commodore Daniel Thompson. Under Commodore Thompson were three Norfolk - based destroyers and a frigate: USS *Porter* (DDG- 78) as flagship, USS *Arleigh Burke* (DDG-51), USS *Stump* (DD-978) and USS *Carr* (FFG-52). Joining the DESRON from Mayport, Florida were USS *O'Bannon* (DD-987) and USS *Boone* (FFG-28), with helicopter detachments from HS-3 and HSL-42. USS *Hyman G. Rickover* (SSN-709) was the Blue force submarine, and the HVU role was played by USS *Gunston Hall* (LSD-44).

During the initial phase of the exercise, the Orange submarine transited from north to south into the battle group OPAREA as the HVU and her escorts tracked southwesterly, making maximum use of the environment to mask their noise. In these early stages, the theater-level IUSS team gained initial contact on the OPFOR submarine and provided valuable cueing while it was still days away from the battle group. The closing range enabled near-continuous tracking and localization for two days by NOPF and the two Surveillance Towed Array Sensor System (SURTASS) ships and facilitated a "hot" turnover to the DESRON as the submarine neared the battle group. At the start of the transition from theater to battle group prosecution, several explosive echo ranging (EER) events were staged by MPRA aircraft, and the resulting echo returns were detected by SURTASS and processed to fix the Orange position. Subsequently, the OPFOR submarine

passed right between the two SURTASS ships. Once the tactical prosecution phase started, both SURTASS ships and all MPRA aircraft were "chopped" to the DESRON.

USNS *Prevai*l (T-AGOS-8)

"IUSS performance was particularly impressive," commented Commodore Thompson. "The long-range detections and accurate classification provided by *Bold* and *Prevail* - and corroborated by fixed-array data processed by NOPF - enabled rapid localization by [our] precursor forces."

During the next two days, the Orange submarine was tracked and hunted relentlessly by Blue's air, surface, and subsurface units. Simultaneously, the HVU made a successful transit of the OPAREA without being detected.

This success was achieved so early in the exercise that the scenario was "reset" and a second round of the cat-and-mouse game was played. Commodore Thompson organized another multi-platform prosecution of the Orange submarine and again, the HVU achieved a successful transit. Assisting him onboard the flagship were representatives from several communities and specialties. CDR Al Camp, Commanding Officer of USS *Tennessee* (SSBN-734), and three other submarine officers provided insight into submarine operations and tactics. Porter's CO, CDR John Newell, and his own and the DESRON staffs provided surface warfare expertise. LT Steve Goff of VP-5 represented the air assets assigned to the DESRON, while ENS Teddy Tan of NOPF gave IUSS support. Other personnel included an acoustics intelligence specialist from the Office of Naval

Intelligence, weather support personnel, and several specialists from other commands. Assigned onboard each SURTASS ship was a crew of eight MILDET personnel - led by IUSS veteran Chief Petty Officer Christine Barnard on *Bold* and CWO4 Allan Britz on *Prevail*.

USS *Hyman G. Rickover* (SSN-709) served as the "Blue" force submarine in the exercise.

Although assigned to a shore-based theater asset, the Sailors at NOPF had a great chance to hone their skills and contribute significantly, even in the tactical phase, when they fused SURTASS data and supplied the battle group with OPFOR positional information for the entire four-day operation. This generally allowed one or more surface or air units to be "holding" the Orange submarine at any given time. "IUSS assets employed in the right manner prove time and again their tactical applicability to any maritime acoustic challenge," emphasized NOPF's Commanding Officer, CDR Katherine Donovan.

Smart Search 02 was just the second of an annual series of planned multi-platform coordinated undersea warfare exercises, and there are certainly more lessons to be learned, particularly about coordinating prosecutions in the littorals. But this year's success was impressive, and IUSS, MPRA, ships, and submarines all added important pieces to the puzzle. Commodore Thompson summed it up best when he noted, "As you've probably heard it said, all of us are smarter than any one of us."

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