A product of...
Navy Office of Information
www.navy.mil

RHUMB LINES
Straight Lines to Navigate By

April 29, 2011

The Undersea Environment and Information Dominance

"SPAWAR and PEO C4I are delivering a wide range of undersea systems and sensors – both for manned and unmanned platforms. The Navy as a whole is changing rapidly, and we are taking a synergistic approach to achieving the CNO's vision of information dominance."

– Rear Adm. Jerry Burroughs, Program Executive Officer Command, Control, Communications, Computers and Intelligence (PEO C4I)

Navy leadership agrees that information dominance is no longer just a warfighting enabler but a core warfighting capability. The Secretary of Defense and CNO have placed emphasis on information dominance, particularly in the undersea environment. To take full advantage of submarine and undersea sensor capabilities, SPAWAR and PEO C4I continue to deliver new command and control capabilities to dramatically improve current and future undersea systems and communications.

Submarines as Nodes in the Strike Group Network

- Carrier strike groups fight most effectively when the commander is able to integrate all available information and provide rapid tasking to available units.
- With their unique sensor placement, significant anti-submarine and anti-surface capabilities, and distinctive ability to launch cruise missiles with stealth, submarines are a critical node in the strike group network.
- Enhanced command and control and satellite communications have improved the operational employment of submarines, increasing the volume and types of information exchanged between submarines and the fleet.
- The capability of submarines and commanders to pass time-sensitive information has closed the information gap that traditionally distanced submarines from a strike group and restricted optimal employment.

Common Submarine Radio Room (CSRR)

- Ohio-class guided-missile submarines are able to better support special operations missions through increased bandwidth capabilities provided by CSRR.
- CSRR provides network-based communications that use bandwidth more efficiently and effectively.
- CSRR delivers baseline commonality across all submarine platforms, drives down maintenance costs, and results in more effective, transferrable training.
- The CSRR open architecture allows for timely upgrades and modernization.

Undersea Dominance Force Multipliers

- Information dominance can be greatly enhanced by deploying remotely piloted and autonomous undersea systems that are able to tie into the network.
- Littoral Battlespace Sensing (LBS) is an unmanned undersea vehicle program that is fielding small, long-duration, buoyancy-driven sensor systems called gliders. These vehicles will be operated by the Naval Oceanographic Office to gather ocean column data to support anti-submarine and mine warfare (MIW), as well as Intelligence Preparation of the Environment (IPOE). The LBS glider program leverages commercially available technology to support Navy missions such as sensing the water column to improve sonar performance, and identifying mine-like objects to enhance MIW capabilities.

Key Messages

- Mastering the undersea environment is a key element of the CNO's vision for information dominance.
- SPAWAR and PEO C4I deliver command and control and communications capabilities to submarines and unmanned undersea systems.
- Improved C4I capabilities facilitate the Navy's command of its battlespace, assets and operations.

Facts & Figures

- SPAWAR and PEO C4I annually complete more than 2,500 installations of C4I systems.
- LBS gliders can operate up to eight months on lithium batteries while collecting data on ocean water column properties.
- For more information on undersea systems and communications visit the SPAWAR PEO C4I website.