HOME   ABOUT   LEADERSHIP   NEWS   MEDIA   LINKS   CAREERS   NAVY POD

Breakthrough Capability Keeps Subs, Ships on Safe Track

Story Number: NNS141216-06   Release Date: 12/16/2014 11:18:00 AM

A A A ✉ 🖨

By Office of Naval Research

ARLINGTON, Va. (NNS) -- Interactive software that can dramatically cut the time it takes to plan safe submarine missions is crossing over to the surface fleet and is being installed this month on the guided-missile cruiser USS Mobile Bay (CG 53), officials announced Dec. 16.

Sponsored by the Office of Naval Research (ONR), the technology adds speed and precision the process of finding the best routes around hazards in waterways around the world.

Sailors spend days or even weeks planning a successful navigation route for a mission. They collect maps and charts, analyze them, double check them and cross reference information that comes in various hard copy and digital forms.

Through partial automation and use of apps and widgets, ONR's Mission Planning Application technology can review thousands of chart markings in a fraction of the time, pinpointing potential hazards and creating optimal routes around rocks, reefs and other shallow spots. What now takes days could take just a few hours or less, freeing commanders to concentrate on safely executing the mission at hand.

"Our goal is for Sailors to be able to carry out a mision effectively and safely," said William "Kip" Krebs, program officer in ONR's Warfighter Performance Department. "This system merges a variety of crucial data so planners can integrate information ahead of time and the command team can focus on the critical operations at hand."

The easy-to-use tools synchronize navigation route plans to produce a visual composite of "what, when, where, why and how" for each mission. Relying solely on manual processes to gather, sort, search and maintain massive amounts of complex data is time consuming and subject to human error, officials say.

Last year, Avenger-class mine countermeasures ship USS Guardian (MCM-5) ran aground partly because errors in nautical charts went unnoticed. In 2005, Los Angeles-class nuclear submarine USS San Francisco (SSN-711) struck an undersea mountain that did not appear on a chart used by the submarine's crew. Information from other charts that noted discolored water -- indicating a possible obstacle -- was never transferred to the chart in use.

The installation on Mobile Bay will help researchers refine the mission planning technology for the surface ship community. ONR also will continue to work with the submarine community to ensure a successful transition to the fleet.

"This is a big deal for the submarine force," said Capt. John Zimmerman, program manager for Submarine Combat Weapons and Control Systems (PMS 425), which is working with ONR to get the software certified for use in the submarine fleet. "As a former commanding officer, I spent loads of time looking for the right charts, getting them approved and looking for all of those shallow spots, so the capability we're getting with this new system is critical."

The mission-planning software was developed under the Capable Manpower Future Naval Capability program, which aims to deliver advanced technology to the fleet in just five years.

In addition to PMS 425, the Mission Planning Application system is the result of partnerships with Naval Research Laboratory, Naval Oceanographic Office, Space and Naval Warfare Systems Center Pacific, Program Executive Office Integrated Warfare Systems, U.S. submarine force, Royal Australian Navy, and industry.

Experts will be discussing technologies like the Mission Planning Application and more at upcoming Naval Future Force Science and Technology EXPO in February, where many of the innovative technologies coming to fruition for the Navy and Marine Corps will be on display.

ONR provides the science and technology necessary to maintain the Navy and Marine Corps' technological advantage. Through its affiliates, ONR is a leader in science and technology with engagement in 50 states, 70 countries, 1,035 institutions of higher learning and 914 industry partners. ONR employs more than 1,000 people, comprising uniformed, civilian and contract personnel, with additional employees at the Naval Research Lab in Washington, D.C.

For more news from Office of Naval Research, visit www.navy.mil/local/onr/.

Tweet   SHARE f 🐦 ✉ ...

STORY COMMENTS

RELATED PHOTOS

Download High Resolution

141025-N-UN259-106 PHILIPPINE SEA (Oct. 25, 2014) Lt. j.g. Colcord Moore, from Boston, Mass., and Quartermaster 1st Class Howell Trinidad, from Long Beach, Calif., discuss navigation charts in the pilot house of the Arleigh Burke-class guided-missile destroyer USS Stethem (DDG 63). Stethem is on patrol with the George Washington Carrier Strike Group supporting security and stability in the Indo-Asia-Pacific region. (U.S. Navy photo by Mass Communication Specialist Seaman Alonzo M. Archer/Released)

October 28, 2014

Navy Social Media

f 🐦 flickr YouTube 🔗

✉ To sign up for updates or to access your subscriber preferences, please click on the envelope icon in the page header above or click here.

Home

About
Status of the Navy

Navy Organization

Strategic Documents

Command Directory

Our Ships

Fact Files

Today in Naval History

Contact Us

FAQ

Leadership
Secretary of the Navy

Chief Of Naval Operations

Master Chief Petty Officer Of The Navy

Chief Of Naval Personnel

Biographies

SES Biographies

Navy Command Tools

News
Top Stories

Headlines

Feature Stories

Local Stories

Media
Video Gallery

Photo Gallery

Featured Galleries

All Hands Magazine

All Hands Update

All Hands Radio News

All Hands Archive

Graphics Gallery

Art Gallery

Podcasts & RSS Feeds

2014 Owners and Operators

Links
Shift Colors-Navy Retiree Newsletter

Naval History & Heritage Command

Affected Navy Family Assistance

Navy / Marine Corps Relief

Navy Office of Community Outreach

USA.gov

Civilian Federal Careers

Navy Standard Integrated Personnel System (NSIPS)

Navy Personnel Command (BUPERS)

Navy EEO

Navy Knowledge Online

Navy SAPR

Military One Source

Navy.mil Underway

Social Media Directory and Policy

Joint Chiefs of Staff

Defense.gov

U.S. Army

U.S. Air Force

U.S. Marine Corps

U.S. Coast Guard

Navy Reserve

Careers
Military Careers

Civilian Careers

Navy POD

Official Website of the United States Navy

Chief of Information
Attn: US Navy
1200 Navy Pentagon
Washington DC 20350-1200

FOIA - Privacy Policy/External Links - No Fear Act