

Joint Warning and Reporting Network (JWARN)

Executive Summary

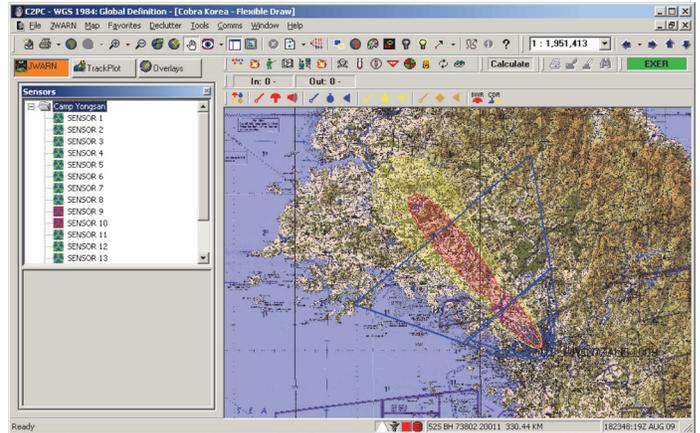
- Joint Warning and Reporting Network (JWARN) software hosted on Global Command and Control System (GCCS) – Maritime is an operationally effective automated Chemical, Biological, Radiological, and Nuclear (CBRN) warning, reporting, and analysis tool for Navy operations to send warning reports to units at risk from a CBRN hazard in time to take protective action when the units are more than 10 kilometers downwind. The Navy should upgrade the GCCS – Joint version currently employed at its Maritime Operations Centers to GCCS – Joint with Plain Language Address (PLA) capability to utilize JWARN to send timely warning messages between battle groups and to other Services when ships are employing emissions control procedures.
- Based on FOT&E results, JWARN software hosted on GCCS – Maritime is operationally suitable and reliable. Operators with JWARN new equipment training are able to successfully execute basic-level analysis and reporting scenarios. During FOT&E, JWARN operators lost situational awareness during more complex CBRN attack scenarios and did not send appropriate and timely hazard warning reports.
- The JWARN Program Office should develop and field computer-based training that includes basic to advanced scenario exercises to increase operator skills and provide sustainment training.

System

- JWARN is a joint automated CBRN warning, reporting, and analysis software tool that resides on joint and Service command and control systems such as the GCCS – Army, GCCS – Joint, GCCS – Maritime, and Command and Control Personal Computer/Joint Tactical Common Workstation, or stand-alone computers.
- JWARN software automates the NATO CBRN warning and reporting process to increase the speed and accuracy

Activity

- The Army Test and Evaluation Command and the Navy’s Commander, Operational Test and Evaluation Force conducted follow-on operational testing of the JWARN hosted on GCCS – Maritime from June 25 – 29, 2012, at the Space and Naval Warfare Systems Center Pacific computer laboratory, in accordance with the DOT&E-approved operational test plan.
- DOT&E approved an updated Test and Evaluation Master Plan on March 19, 2012, to address follow-on developmental and operational testing of the JWARN when hosted on GCCS – Maritime.



of information sharing to support force protection decision making and situational awareness.

- JWARN uses the Common Operating Picture of the host command and control network to display ground maps; unit locations; location of CBRN events; and the predicted or actual location of hazards to support the Commanders’ situational awareness and response capability.

Mission

JWARN operators in command cells support CBRN force protection, battlefield management, and operational planning by predicting chemical, biological, and nuclear hazard areas based on sensor and observer reports, identifying affected units and operating areas, and transmitting warning reports.

Major Contractor

Northrop Grumman Mission Systems – Orlando, Florida

- The program conducted developmental and reliability growth testing to demonstrate readiness for follow-on operational testing at the Space and Naval Warfare Systems Center Pacific computer laboratory in San Diego, California, from November to December 2011 with JWARN hosted on GCCS – Maritime and GCCS – Joint with PLA.
- DOT&E approved the JWARN follow-on operational test plan on June 5, 2012.

Assessment

- JWARN software hosted on GCCS – Maritime provides an operationally effective automated CBRN warning, reporting, and analysis tool to send warning reports to units at risk from a CBRN hazard in time to take protective action if the units are more than 10 kilometers downwind for the initial hazard.
- During normal operations, U.S. Navy Expeditionary Strike Groups can exchange CBRN hazard warnings and reports with Navy Maritime Operations Centers for communication across the naval fleet and Services using JWARN and GCCS host e-mail capability. When ships are employing emissions control procedures to avoid being located by the enemy, e-mail capability is shut down. Ships in emissions control mode are able to send CBRN JWARN hazard warnings and reports using GCCS-Maritime PLA text messaging capability.
- The version of GCCS – Joint used by Navy Maritime Operations Centers does not have PLA capability. JWARN is not compatible with the current legacy software used by Navy Maritime Operations Centers to send PLA text messages. Personnel at the Navy's Maritime Operations Centers must manually enter information from JWARN reports into a legacy system with PLA capability to send CBRN warnings and reports to ships employing emission control procedures. This presents an opportunity for transcription errors and creates a delay that may cause CBRN warning messages to reach ships at risk too late to implement effective protective actions.
- During FOT&E, operators using JWARN demonstrated interoperability with a developmental version of GCCS – Joint with PLA capability. Fielding GCCS – Joint with PLA capability at Navy Maritime Operations Centers would speed delivery of CBRN warning messages when ships are implementing emissions control measures and are unable to receive e-mail communications.
- JWARN software hosted on GCCS – Maritime is operationally suitable. The JWARN software hosted on GCCS – Maritime is reliable. Operators with new equipment training are able to successfully execute basic-level analysis and reporting scenarios. However, JWARN operators require advanced training in order to successfully execute CBRN analysis and reporting when faced with complex CBRN attack scenarios.

Recommendations

- Status of Previous Recommendations. The program manager addressed all previous recommendations.
- FY12 Recommendations.
 1. The Navy should work with the GCCS program to coordinate deployment of GCCS – Joint with PLA capability to Maritime Operations Centers with deployment of GCCS – Maritime (with JWARN).
 2. The program manager should develop and field computer-based training that includes basic to advanced scenario exercises to increase operator skills and provide sustainment training.