

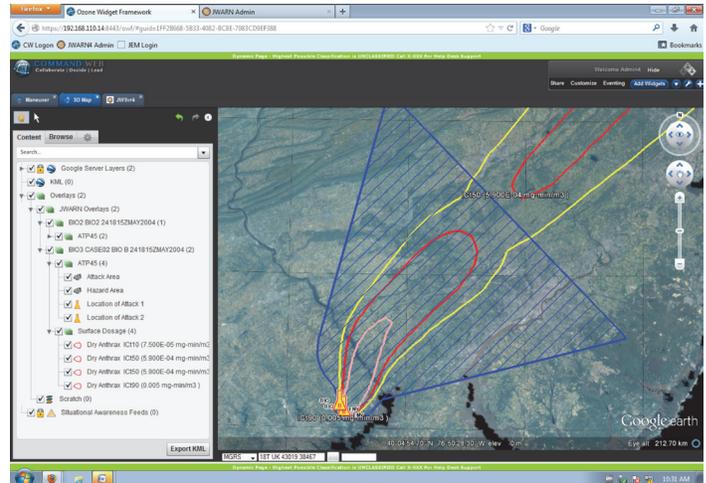
Joint Warning and Reporting Network (JWARN)

Executive Summary

- The Army Test and Evaluation Command conducted the Joint Warning and Reporting Network (JWARN) Increment 1 Modernization Operational Assessment test event in a laboratory setting at the Central Technical Support Facility at Fort Hood, Texas, from July 25 – 31, 2013.
- During the operational assessment, DOT&E observed the following:
 - Network instability and the immaturity of Army Command Web, on which the JWARN Increment 1 Modernization application resides, adversely affected the ability of JWARN operators to warn at-risk company-level units.
 - JWARN operators were able to send warning reports to notional at-risk battalions and the brigade in time to take protective action when the units were more than 10 kilometers downwind from the hazard release location.

System

- JWARN is a joint automated chemical, biological, radiological, and nuclear (CBRN) warning, reporting, and analysis software tool that resides on joint and Service command and control systems including the Global Command and Control System (GCCS) – Army, GCCS – Joint, GCCS – Maritime, and Command and Control Personal Computer/Joint Tactical Common Workstation.
- JWARN Increment 1 Modernization is a web-application on the Army Command Web as part of the Command Post Computing Environment. There is also a JWARN version that operates on a stand-alone computer.
- JWARN software automates the NATO CBRN warning and reporting process to increase the speed and accuracy of information sharing to support force protection decision making and situational awareness.



- JWARN uses the common operating picture map of the host command and control system or computing environment to display the 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 provide 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

Activity

- DOT&E approved the JWARN Increment 1 Test and Evaluation Master Plan (TEMP) Annex on July 10, 2013.
- DOT&E approved the test plan for the JWARN Increment 1 Modernization Operational Assessment on July 9, 2013.
- The Army Test and Evaluation Command conducted the JWARN Increment 1 Modernization Operational Assessment test event in a laboratory setting at the Central Technical Support Facility at Fort Hood, Texas, from July 25 – 31, 2013, in accordance with the DOT&E-approved test plan.

Assessment

- During the laboratory-based operational assessment, the immaturity of Army Command Web and network instability adversely affected the JWARN web application operators'

- ability to provide timely warnings to notional at-risk company-level units, which rely on graphical depictions of the warning on the common operating picture display.
- The JWARN web application operators demonstrated the ability to provide timely warning to notional at-risk units located more than 10 kilometers downwind from the initial hazard. For notional units closer than 10 kilometers, the JWARN web application operators provided timely warnings to 42 percent of the at-risk units. This performance is consistent with prior versions of JWARN employed on Service command and control systems.
- The JWARN web application reliability failures during the operational assessment, to include intermittent unresponsiveness, delayed transmission of e-mail messages,

and intermittent ability to generate high-fidelity hazard prediction plumes using the Joint Effects Model, did not prevent the timely warning of at-risk units.

- Training provided to operators by the Army was not adequate for operators to consistently provide accurate situational awareness during multiple simultaneous attacks and when information was received from more than one observer report.

Recommendations

- Status of Previous Recommendations. The Navy and Program Office have addressed DOT&E's previous recommendations.

However, the program manager still needs to validate and field to the Services the computer-based training for JWARN on GCCS–Joint and GCCS–Maritime.

- FY13 Recommendation.
 1. The Program Office should develop, validate, and field computer-based training for JWARN on GCCS – Army and the JWARN web application on the Army Command Web that includes basic to advanced scenario exercises to increase operator skills and provide sustainment training.