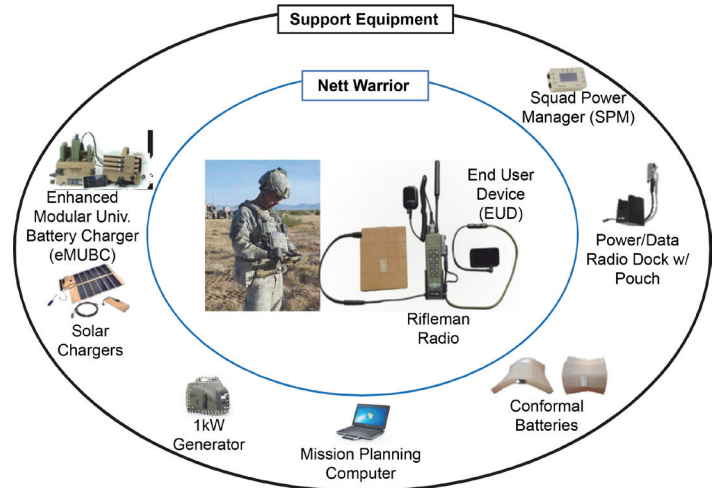


Nett Warrior

Executive Summary

- In 3QFY14, the Assistant Secretary of the Army for Acquisition, Logistics, and Technology authorized an additional low-rate initial production (LRIP) for 5,115 Nett Warrior systems to support fielding to Capability Set 15 and Capability Set 16.
- The Army Test and Evaluation Command (ATEC) executed an IOT&E in two phases:
 - A mounted Cavalry troop executed Phase 1 during Network Integration Evaluation 14.2 at Fort Bliss, Texas (May 2014).
 - A dismounted rifle company executed Phase 2 at Fort Polk, Louisiana (November 2014).
- Nett Warrior improved situational awareness at the platoon level and continues to enhance pre-mission planning tasks, land navigation, and command and control.
- Nett Warrior is reliable, demonstrating a reliability point estimate of 445 operating hours during Phase 1 and a reliability point estimate of 175.4 operating hours during Phase 2.
- DOT&E intends to publish an IOT&E report in 2QFY15 to support the 3QFY15 Full-Rate Production Decision Review.



messages, and enemy activity on a digital geo-referenced map image. The Nett Warrior is connected through a secure radio to the Soldier Radio Waveform (SRW) network to communicate among different echelons using voice, data, and position location information messages.

System

- The Nett Warrior is a dismounted leader situational awareness system for use during combat operations. Nett Warrior consists of the following:
 - End User Device (EUD), a commercial off-the-shelf Samsung Note smartphone
 - Government-furnished Rifleman Radio (AN/PRC-154A) (Rifleman Radio is a separate program of record, with a separate article later in this Annual Report.)
 - Conformal battery
 - Connecting cables
 - Supporting charging equipment
- Periodic Nett Warrior enhancements integrate improved commercial EUD technologies.
- The Nett Warrior graphically displays the location of an individual leader, other leaders, friendly vehicles, battlefield

Mission

- Leaders within the Brigade Combat Team use Nett Warrior to provide improved situational awareness, command and control, and enhanced communications.
- Combatant Commanders employ Nett Warrior-equipped infantry and cavalry dismounted leaders as part of a Brigade Combat Team to conduct operations (offensive, defensive, stability, and defense support of civil authorities) against conventional or unconventional enemy forces in all types of terrain and climate conditions.

Major Contractors

- EUD: Samsung – Seoul, South Korea
- Rifleman Radio:
 - General Dynamics C4 Systems – Scottsdale, Arizona
 - Thales Communications Inc. – Clarksburg, Maryland

Activity

- In 3QFY14, the Assistant Secretary of the Army for Acquisition, Logistics, and Technology authorized an additional LRIP for 5,115 Nett Warrior systems to support fielding to Capability Set 15- and 16-fielded units. This additional LRIP allowed the program manager to buy 41 percent of the Approved Acquisition Objective.
- ATEC executed an IOT&E in two phases:
 - Phase 1, conducted by a mounted cavalry troop during Network Integration Evaluation 14.2 at Fort Bliss, Texas, in May 2014.
 - Phase 2, conducted by a dismounted rifle company at Fort Polk, Louisiana, in November 2014.

FY14 ARMY PROGRAMS

- DOT&E intends to publish an IOT&E report in 2QFY15 to support the Full-Rate Production Decision Review in 3QFY15.
- The Army conducted all testing in accordance with the DOT&E-approved Test and Evaluation Master Plan and test plans.

Assessment

IOT&E Phase 1

- The Nett Warrior was effective in a mounted reconnaissance formation. The Nett Warrior improved situational awareness at the platoon and troop level and enhanced pre-mission planning tasks, land navigation, and command and control.
- Testing revealed interoperability problems between Nett Warrior and the Joint Battle Command – Platform (JBC-P). The Nett Warrior could not consistently transmit and receive survivability data messages in the variable message formats used with JBC-P. Free Text messages were the most common type of command and control messages sent between Nett Warrior and JBC-P.
- Nett Warrior demonstrated a reliability point estimate of 445 operating hours, exceeding the threshold and objective requirement of 148 and 291 hours, respectively. Nett Warrior demonstrated 92 percent operational availability, exceeding the 90 percent requirement.
- The Rifleman Radio battery heated to temperatures exceeding 120 degrees Fahrenheit. Soldiers experienced discomfort from hot batteries. The Rifleman Radio battery life did not meet the same results observed in developmental testing. During the IOT&E, battery life was 2 to 6 hours as opposed to 6 to 8 hours during developmental testing. Post-test analysis showed the battery stopped charging when it reached a temperature of 118 degrees Fahrenheit, but still provided power. For further information, see the FY14 Annual Report article on Rifleman Radio.

IOT&E Phase 2

- The Nett Warrior was effective in light infantry platoon formations. Use of the Nett Warrior improved situational awareness at the platoon level and continues to enhance pre-mission planning tasks, land navigation, and command and control.
- The infantry company was hampered by the short range of the SRW on the AN/PRC-155 Manpack radio in woodland terrain.

- The Manpack radio connected the Nett Warrior systems of the leaders between platoons to each other and to the Nett Warrior systems in the company headquarters. The infantry company did not have complete situational awareness because the Manpack radio did not transmit position location information in a consistent manner. SRW is the waveform the Army has selected for both voice and data communications at these tactical echelons. SRW demonstrates a shorter-range vis-à-vis the legacy Single Channel Ground and Airborne Radio System (SINGARS) waveform it is replacing in this network. This result is not surprising given that SRW operates at a much higher frequency than does SINGARS, as higher frequencies have shorter ranges and are more affected by terrain obstructions.
- The test unit experienced challenges with managing battery charging and resupply at the company level. The company had to use a 3-kilowatt generator from battalion headquarters to charge all the batteries required to support the company's Nett Warrior systems and Manpack radios. The generators fielded with the Nett Warrior were insufficient to support the company.
- The Army corrected the deficiency of the radio battery not charging in high temperatures by modifying the battery firmware setting to allow charging at higher temperature limits, up to the high-temperature exposure limit of Military Standard-1472 (140 degrees Fahrenheit versus 118 degrees Fahrenheit).
- Nett Warrior is suitable. Nett Warrior demonstrated a reliability point estimate of 175.4 operating hours, exceeding the threshold requirement of 148.
- DOT&E will publish a Nett Warrior IOT&E report in 2QFY15.

Recommendations

- Status of Previous Recommendations. The Army addressed all previous recommendations.
- FY14 Recommendation.
 1. The Army should continue to improve the SRW network and associated radios to increase the range at which Soldiers and leaders can use Nett Warrior.