

## Joint Battle Command – Platform (JBC-P)

### Executive Summary

- During October through November 2014, the Army conducted testing of JBC-P 6.0 to verify fixes of deficiencies noted during the May 2014 JBC-P 6.0 Multi-Service Operational Test and Evaluation (MOT&E). JBC-P continued to exhibit phantom Mayday messages and a new deficiency of delayed position location information (PLI) updates. The Army did not approve a full materiel release, but approved a conditional materiel release to field one Army brigade and continue testing because these deficiencies were not corrected.
- In June 2015, the Army conducted further testing of JBC-P 6.0 in conjunction with fielding of the first unit to verify correction of MOT&E deficiencies. The Army demonstrated:
  - A reduction in phantom Mayday messages (five during test), which were manageable through unit standard operating procedures.
  - Correction of delayed PLI updates.
  - Proper representation of map graphics and unit icons.
 The Army plans to pursue another conditional materiel release to pursue further fielding and testing of JBC-P 6.0.
- The Army intends to conduct an operational test of JBC-P Logistics (Log) using an Army sustainment brigade. The Army will also perform further cybersecurity testing to address deficiencies noted during the JBC-P MOT&E.

### System

- JBC-P is a networked battle command information system that enables units to share near real-time friendly and enemy situational awareness information, operational maps and graphics, and command and control messages.
- The Army and Marine Corps intend JBC-P to achieve platform level interoperability for ground vehicles, dismounted Soldiers/Marines, and aviation assets operating in land/littoral and joint operational environments.
- JBC-P is an upgrade to the Force XXI Battle Command Brigade and Below Joint Capabilities Release and provides the following improvements:
  - Tactical chat combined with chat room capability, providing enhanced collaboration for commanders
  - Improved mission command applications for planning and execution
  - A more intuitive graphical user interface with an improved map and image display
  - Enhanced Blue Force situational awareness between mobile platforms, Tactical Operational Centers, and dismounted Soldiers equipped with Nett Warrior
  - JBC-P Log, which is a logistical variant of JBC-P that supports sustainment and enables logistics cargo tracking using Radio Frequency Identification tags



- 1 - JBC-P on Mounted Family of Computer Systems (MFCs)
- 2 - JBC-P on Joint Version - 5 (JV-5) Block 2
- 3 - JBC-P Screen Shot
- 4 - JBC-P Log on Military Rugged Tablet Plus (MRT+)
- 5 - JBC-P on JV-5 Block 2

- Hybrid capability to connect JBC-P across different networks using its Network Services Gateway and associated terrestrial and satellite radios
- JBC-P is fielded in both mobile and command post versions. JBC-P communications is supported by:
  - Blue Force Tracker 2 satellite communications for mobile operations
  - Tactical radios for connectivity between JBC-P-equipped vehicles and to support dismounted operations
  - Tactical Internet for command post operations

### Mission

The Army, Marine Corps, and Special Operations Forces commanders use JBC-P to provide integrated, on-the-move, near real-time battle command information and situational awareness, from brigade, to maneuver platform, to dismounted Soldiers/Marines.

### Major Contractor

Software Engineering Directorate, U.S. Army Aviation & Missile Research, Development & Engineering Center – Huntsville, Alabama

# FY15 ARMY PROGRAMS

## Activity

- In May 2014, the Army and Marine Corps conducted a JBC-P software build 6.0 MOT&E as part of the Network Integration Evaluation (NIE) 14.2 to support fielding decisions in both Services. The MOT&E was performed in accordance with a DOT&E-approved test plan.
- During October through November 2014, the Army conducted testing of JBC-P 6.0 as part of NIE 15.1 to verify fixes of deficiencies noted during the JBC-P 6.0 MOT&E. The Army assessed JBC-P using observations, surveys, and focus groups within the 2nd Brigade Combat Team, 1st Armored Division operating under realistic mission conditions at Fort Bliss, Texas. JBC-P continued to demonstrate phantom Mayday messages and exhibited a new deficiency of delayed PLI updates. Since the MOT&E deficiencies were not corrected, the Army did not approve a full materiel release, but approved a conditional materiel release to field one Army brigade and continue testing.
- In January 2015, DOT&E submitted a JBC-P 6.0 MOT&E report with a classified annex detailing results of testing during NIE 14.2.
- In June 2015, the Army conducted further testing of JBC-P 6.0 employing the 2nd Infantry Brigade Combat Team, 3rd Infantry Division operating under realistic mission conditions at Fort Stewart, Georgia, to verify correction of MOT&E deficiencies. As with NIE 15.1, the Army collected observations, surveys, and focus group data. The Army plans to pursue another conditional materiel release to pursue further fielding and testing of JBC-P 6.0.
- The Army intends to conduct an operational test of JBC-P Log using an Army sustainment brigade. The Army will also perform further cybersecurity testing to address deficiencies noted during the JBC-P MOT&E.

## Assessment

- In the January 2015 JBC-P MOT&E report, DOT&E assessed JBC-P 6.0 as:
  - Not operationally effective due to low message completion rates, phantom Mayday messages, inaccurate representation of blue force icons, and the poor performance of JBC-P Log.
  - Not operationally suitable due to reliability that was below the Army's requirement for five of seven JBC-P hardware

variants, deficiencies in training provided to leaders and Soldiers, and lack of a force structure to support JBC-P Log.

- Not survivable due to cybersecurity vulnerabilities.
- During FY15, the Army verified fixes of several JBC-P 6.0 MOT&E deficiencies to include demonstrating:
  - A reduction in phantom Mayday messages (five during test), which were manageable through unit standard operating procedures
  - Correction of delayed PLI updates
  - Proper representation of map graphics and unit icons
- The following JBC-P 6.0 MOT&E deficiencies remain to be corrected and verified through testing:
  - Cybersecurity vulnerabilities identified in the JBC-P MOT&E classified report
  - Low message completion rates of shared survivability information (e.g., icons representing enemy minefields, an IED, or damaged bridge)
  - Poor performance and lack of force structure to support JBC-P Log
  - JBC-P reliability
- The Army has not yet developed its T&E strategy for further JBC-P enhancements and the planned transition to the Mounted Computing Environment.

## Recommendations

- Status of Previous Recommendations. The Army made improvements in one of five previous recommendations, yet still needs to improve JBC-P message completion rates, reliability, JBC-P Log force structure, Soldier and leader training, and cybersecurity.
- FY15 Recommendations. The Army should:
  1. Continue to correct JBC-P 6.0 MOT&E deficiencies and conduct developmental and operational testing to verify fixes of MOT&E deficiencies to include cybersecurity vulnerabilities, low message completion rates, reliability, and JBC-P Log performance.
  2. Improve JBC-P leader and Soldier training.
  3. Update the JBC-P Test and Evaluation Master Plan to include testing to verify fixes and future JBC-P enhancements.