

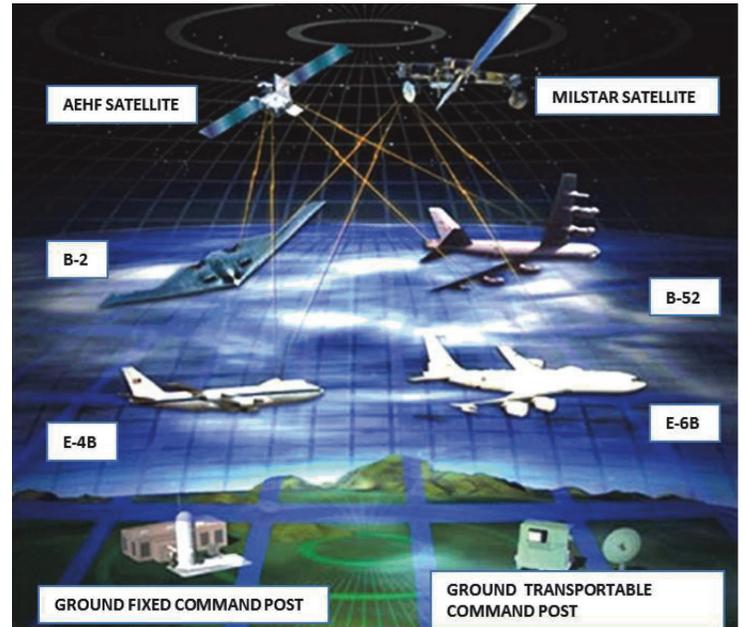
## Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)

### Executive Summary

- In 2012, the USD(AT&L) directed the Air Force to award a contract to a second source to compete with the Boeing Company for development of the Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) Command Post Terminal (CPT). The Air Force awarded a development contract to the Raytheon Corporation.
- On June 2, 2014, the Air Force down-selected from the two development contractors and awarded the Raytheon Corporation the production contract for the CPT. The Air Force plans to exercise production contract options to produce CPT terminals after a successful Milestone C decision.
- The program's CPT development is approximately four months behind Raytheon's originally proposed schedule. Continued delays may be experienced due to a highly-concurrent developmental test schedule.
- The Air Force Operational Test and Evaluation Center (AFOTEC) conducted an operational assessment from July through December 2014, based on contractor and government developmental flight testing to inform the Milestone C decision planned for March 2015.

### System

- FAB-T consists of ground and aircraft communication terminals with two terminal types – CPTs and Force Element Terminals (FETs). FAB-T is part of the terminal and control segments of the Advanced Extremely High Frequency (AEHF) satellite system and is designed to operate with AEHF Low Data Rate (75 – 2,400 bits per second (bps)) and Extended Data Rate (up to 8.192 Megabits per second (Mbps)) waveforms.
- The CPT is intended to replace existing airborne (E-4B and E-6B), ground-fixed, and ground-transportable Milstar command post terminals. The CPT will include satellite and network control functions, end-user telecommunication device interfaces, and the ability to operate the terminal from a distant location using a remote node.
- The FET is intended to be installed in airborne force elements (B-2, B-52, and RC-135). The FET is a requirement but is



currently neither funded nor on contract for development and production.

### Mission

- The President, the Secretary of Defense, Combatant Commanders, and support Air Force component forces will use FAB-T to provide strategic nuclear and non-nuclear command and control with EHF, wideband, protected, and survivable communications terminals for beyond line-of-sight communications.
- U.S. Strategic Command will use the FAB-T to perform the satellite Telemetry, Tracking, and Commanding functions of the AEHF/Milstar constellation, including management of the satellites, communication networks and cryptologic keys.

### Major Contractor

Raytheon Net-Centric Systems – Marlborough, Massachusetts

### Activity

- In 2012, the USD(AT&L) directed the Air Force to award a contract to a second source to compete with the Boeing Company for development and production of the CPT with Presidential and National Voice Conferencing (PNVC). Additionally, USD(AT&L) directed the Air Force to defer

development of the FET. The Air Force awarded the second sourcing contract for the CPT development to the Raytheon Corporation.

- The Defense Information Systems Agency is developing the PNVC equipment that FAB-T will use to provide strategic

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services to Senior Leadership, which is a Key Performance Parameter.

- The FAB-T program manager planned to conduct contractor and government developmental flight testing for the Boeing variant from February through June 2013. Schedule delays and developmental regression testing extended this time through April 2014.
- The Raytheon Corporation conducted two system demonstrations in 2013 to provide the government confidence they had a viable solution that could interoperate with the EHF satellites and terminals.
- On June 2, 2014, the Air Force down-selected from the two development contractors and awarded the Raytheon Corporation the production contract for the CPT. The Air Force plans to exercise production contract options to produce CPT terminals after a successful Milestone C decision.
- AFOTEC compressed their normal planning timeline and rapidly developed an operational assessment test plan to support the FAB-T program manager's new schedule based on the Raytheon selection. DOT&E approved the operational assessment test plan on July 17, 2014. AFOTEC conducted an operational assessment in accordance with the DOT&E-approved test plan from 4QFY14 – 2QFY15 based on contractor and government developmental flight testing to inform the Milestone C decision projected for March 2015.

- With the selection of Raytheon as the producer of the FAB-T CPT, the schedule and developmental test strategy have significantly changed. Consequently, the previous Test and Evaluation Master Plan (TEMP) based on the Boeing variant is no longer valid. The Air Force is working to develop a new CPT Milestone C TEMP that supports the current test program.

## Assessment

- The Defense Information Systems Agency's PNVC development requires an Engineering Change Proposal because current variants do not meet environmental conditions sufficient for aircraft operations. This increases schedule risk in providing aircraft-variant production units for FOT&E projected for FY17.
- The program's CPT development is approximately four months behind Raytheon's original proposed schedule. Continued delays may be experienced due to a highly concurrent developmental test schedule.

## Recommendations

- Status of Previous Recommendations. The Air Force has addressed the four previous recommendations.
- FY14 Recommendation.
  1. The Air Force should expedite staffing of the FAB-T TEMP in order to meet the proposed Milestone C date.