



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-199



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

As of FY 2016 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MDAP Programs	3
Program Information	5
Responsible Office	5
References	5
Mission and Description	6
Executive Summary	7
Threshold Breaches	8
Schedule	9
Performance	11
Track to Budget	16
Cost and Funding	18
Low Rate Initial Production	28
Foreign Military Sales	29
Nuclear Costs	29
Unit Cost	30
Cost Variance	33
Contracts	36
Deliveries and Expenditures	38
Operating and Support Cost	39

Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
\$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
\$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
\$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President's Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

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

DoD Component

Air Force

Joint Participants

US Navy (E-6 TACAMO aircraft); US Navy (Ground Terminals); US Army (Ground Terminals)

Responsible Office

Mr. Robert E. Tarleton, Jr.
MILSATCOM Systems Directorate
Los Angeles Air Force Base
483 N. Aviation Blvd.
El Segundo, CA 90245

robert.tarleton@us.af.mil

Phone: 310-653-9001
Fax: 310-653-9636
DSN Phone: 633-9001
DSN Fax: 633-9636
Date Assigned: February 10, 2014

References

SAR Baseline (Development Estimate)

FY 2008 President's Budget dated February 1, 2007

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated December 22, 2007

Mission and Description

The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) program will develop nuclear event-survivable terminals capable of communicating with the Milstar and Advanced Extremely High Frequency (AEHF) satellite constellations using both the Extremely High Frequency and AEHF jam-resistant, low probability of intercept and low probability of detection waveforms. These terminals will be an essential component of the strategic nuclear execution system. FAB-T will upgrade the existing enterprise Command Post Terminals located on the ground (fixed and transportable) and airborne on the E-4B and E-6B. Mission capabilities include Presidential and National Voice Conferencing, Integrated Tactical Warning Attack Assessment, Emergency Action Message dissemination, satellite Telemetry, Tracking & Control, and force reportback.

Executive Summary

In 2014, the program continued to make significant progress toward completing development with two vendors, Boeing and Raytheon, both conducting post Milestone B testing activities nearing the completion of the EMD phase of the program. Additionally, the program completed source selection activities for the FAB-T production contract.

In June 2014, Raytheon was competitively selected as the FAB-T production contractor for the Command Post Terminal only. Developmental testing continues on the Raytheon contract with a Milestone C expected in 4th Quarter FY 2015. Raytheon development formal qualification tests are on-going. Software Qualification Tests are 100% complete; all 3,963 requirements passed. TEMPEST testing is performed to determine if unencrypted classified information signals emanating from a piece of equipment exceed levels specified in the requirements. FAB-T TEMPEST testing is 100% complete; all 205 requirements passed. Both contractor and Government flight tests are complete with positive results.

The revised date for Milestone C and LRIP is due to hardware development anomalies and lack of sufficient numbers of engineering development models, which precluded planned concurrent testing. LRIP will be approved at Milestone C. This change to schedule resulted in revised estimates for Initial Operational Test & Evaluation, FRP, IOC and FOC as well. An APB is currently in coordination to support Milestone C and will include updated costs, schedule, and quantity distributions to support re-baselining the program. Procurement of the Force Element Terminals, formerly referred to as Advanced Wideband Terminals, is projected for mainly outside the FYDP starting in FY 2020. President of the United States terminal funding has been reduced in FY 2016-2019. FAB-T funding and quantities have been adjusted accordingly.

Software development and testing have been excellent to date with very few anomalies.

There are no significant software-related issues with this program at this time.

Threshold Breaches

APB Breaches		Explanation of Breach
Schedule	<input checked="" type="checkbox"/>	The Schedule and RDT&E Cost breaches were reported in the December 2012 SAR.
Performance	<input type="checkbox"/>	
Cost	<input checked="" type="checkbox"/>	In CY 2012, the entire program was restructured to control costs and introduce competition. Competitive production proposals were received in 1st Quarter CY 2013. The program completed a down-select in June 2014. The program will update the APB to rebaseline the program and proceed to the Production and Deployment phase.
RDT&E	<input checked="" type="checkbox"/>	
Procurement	<input type="checkbox"/>	
MILCON	<input type="checkbox"/>	
Acq O&M	<input type="checkbox"/>	
O&S Cost	<input type="checkbox"/>	
Unit Cost	<input type="checkbox"/>	
PAUC	<input type="checkbox"/>	
APUC	<input type="checkbox"/>	

Nunn-McCurdy Breaches

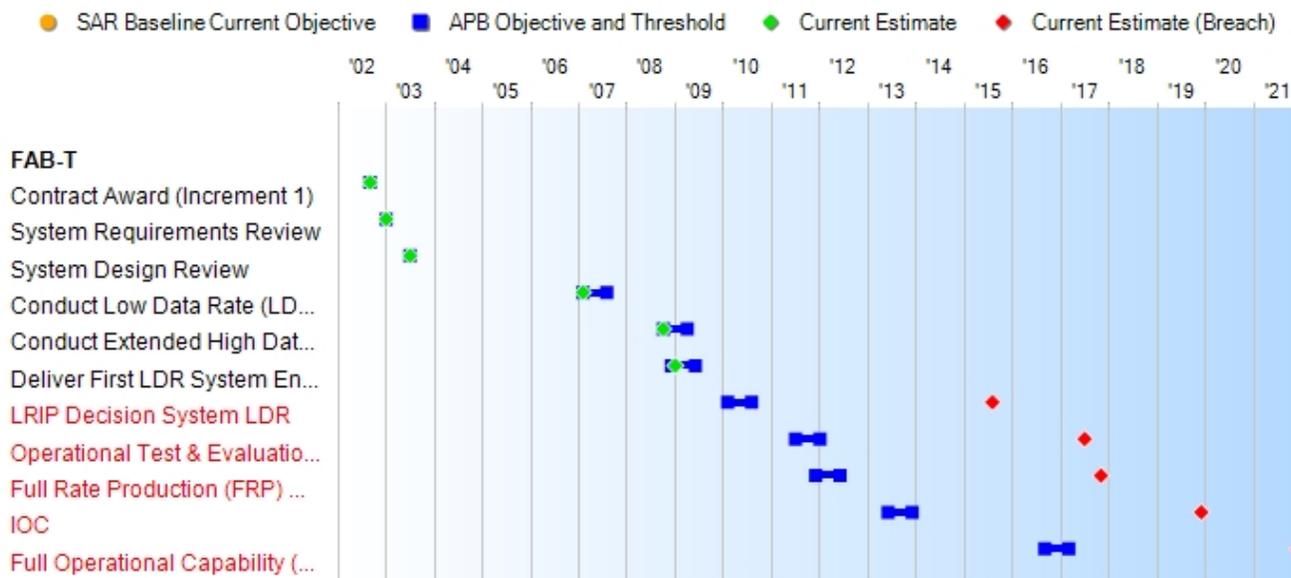
Current UCR Baseline

PAUC None
 APUC None

Original UCR Baseline

PAUC None
 APUC None

Schedule



Schedule Events				
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate
Contract Award (Increment 1)	Sep 2002	Sep 2002	Sep 2002	Sep 2002
System Requirements Review	Jan 2003	Jan 2003	Jan 2003	Jan 2003
System Design Review	Jul 2003	Jul 2003	Jul 2003	Jul 2003
Conduct Low Data Rate (LDR) System Critical Design Review (CDR)	Feb 2007	Feb 2007	Aug 2007	Feb 2007
Conduct Extended High Data Rate (XDR) System CDR	Jul 2008	Oct 2008	Apr 2009	Oct 2008
Deliver First LDR System Engineering Development Model (EDM)	Dec 2008	Dec 2008	Jun 2009	Jan 2009
LRIP Decision System LDR	Feb 2010	Feb 2010	Aug 2010	Aug 2015¹ (Ch-1)
Operational Test & Evaluation (OT&E) Complete	Jul 2011	Jul 2011	Jan 2012	Jul 2017¹ (Ch-1)
Full Rate Production (FRP) Decision	Jul 2011	Dec 2011	Jun 2012	Nov 2017¹ (Ch-1)
IOC	Jun 2013	Jun 2013	Dec 2013	Dec 2019¹ (Ch-1)
Full Operational Capability (FOC)	Sep 2016	Sep 2016	Mar 2017	Dec 2021¹ (Ch-1)

¹ APB Breach

Change Explanations

(Ch-1) LRIP Decision System LDR has changed from March 2015 to August 2015, Operational Test & Evaluation (OT&E) Complete has changed from TBD to July 2017, Full Rate Production (FRP) Decision has changed from TBD to November 2017, IOC has changed from September 2019 to December 2019, and Full Operational Capability (FOC) has changed from March 2021 to December 2021. These changes are the result of delays due to concurrent testing, availability of Engineering Development Models and unexpected hardware anomalies.

Notes

Breached Milestone dates have been reported in previous SAR cycles. The FAB-T SAR continues to report against the 2007 APB. The USD(AT&L) ADM, dated August 23, 2012, directed a new APB. The revised APB will include an accurate and applicable schedule for the program to report against.

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold	Demonstrated Performance	Current Estimate	
Interoperability				
Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes	Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes	Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes	Flight testing conducted Nov -14 demonstrated interoperability w/NMT, AFCPT, MMPU, and DMUs via the various formats of EAMs, FDMs, AFRB, NRB, and Milstar UHF crossbanded DAMA network messages. Each repeated on both Milstar and AEHF (BC-LDR when necessary, DAMA with AFCPT & DMUs via Milstar only).	Enable all top-level IERs, as depicted by mission area and designated critical between sending and receiving nodes
Information Assurance				
Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1-M, DoD 8500.1, and DoDI 8500.2, or DoD certification and accreditation process at time of contract award	Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1-M, DoD 8500.1, and DoDI 8500.2, or DoD certification and accreditation process at time of contract award	Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1-M, DoD 8500.1, and DoDI 8500.2, or DoD certification and accreditation process at time of contract award	System is being built to DIACAP controls. STIG testing against Operator Processing Unit (OPU) performed in April and November 2014. Full DIACAP testing scheduled to be performed in January 2015.	Meet DoD IA criteria and be certified/ accredited IAW DoD 8510.1 M, DoD 8500.1, and DoDI 8500.2, or DoD certification and accreditation process at time of contract award
Survivability				
FMC w/o damage/ degradation, throughout the nuclear environment that the air craft is expected to survive, while meeting PCMR requirements	FMC w/o damage/ degradation, throughout the nuclear environment that the aircraft is expected to survive, while meeting PCMR requirements	FMC w/o damage/ degradation, throughout the nuclear environment that the aircraft is expected to survive, while meeting PCMR requirements	Test parts for radiation hardness, analysis will validate terminal level probability of survival; NSV testing for Block 1 was completed in November 2014.	FMC w/o damage/ degradation, throughout the nuclear environment that the aircraft is expected to survive, while meeting PCMR requirements
AWT Legacy Milstar Support				
Provide legacy Milstar dedicated connections to transmit/ receive functions associated	Provide legacy Milstar dedicated connections to transmit/ receive functions	Provide legacy Milstar dedicated connections to transmit/ receive functions	N/A - AWT requirements are currently deferred	Provide legacy Milstar dedicated connections to transmit/ receive functions

with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)	associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)	associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)		associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)
AWT Nuclear Interoperability				
Interoperate with platform required JCS nuclear protected IER	Interoperate with platform required JCS nuclear protected IER	Interoperate with platform required JCS nuclear protected IER	N/A - AWT requirements are currently deferred	Interoperate with platform required JCS nuclear protected IER
AWT Security Protection				
Protect all transmitted and received Information	Protect all transmitted and received Information	Protect all transmitted and received Information	N/A - AWT requirements are currently deferred	Protect all transmitted and received Information
AWT Security Levels				
Process and/or disseminate information products at any single level of classification up to and including TS/SCI	Process and/or disseminate information products at any single level of classification up to and including TS/SCI	Process and/or disseminate information products at any single level of classification up to and including TS/SCI	N/A - AWT requirements are currently deferred	Process and/or disseminate information products at any single level of classification up to and including TS/SCI
AWT Force Direction/Reportback				
Enable EAM dissemination and FE report back	Enable EAM dissemination and FE report back	Enable EAM dissemination and FE report back	N/A - AWT requirements are currently deferred	Enable EAM dissemination and FE reportback
CPT Control Interface				
Support use of ASMCS and MPSS satellite / network / terminal control equipment	Support use of ASMCS and MPSS satellite/ network/ terminal control equipment	Support use of ASMCS and MPSS satellite/ network/ terminal control equipment	TBD; Prime Item Block 2 and ASMCS/NAST-T & MPSS Testing (3Q/4Q FY15)	Support use of ASMCS and MPSS satellite/ network/ terminal control equipment
CPT Backwards Compatability				
Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red Switch	Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red Switch	Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red Switch	TBD. Prime Item Block 1, Baseband Input/Output Testing (2QFY15).	Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red Switch
CPT Existing Terminal Coexistence				
Interoperable with existing EHF terminals	Interoperable with existing EHF terminals	Interoperable with existing EHF terminals	Interoperability testing with legacy AFCPT, NMT, SMART-T, MMPU and DMU terminals was completed	Interoperable with existing EHF terminals

			December 2014 using Milstar and AEHF satellites. Link quality testing as well as simulated EAMs and FDMs have been exchanged.	
CPT Satellite Constellation Coexistences				
Interoperable with the AEHF, APS, Milstar, and UFO-E/EE	Interoperable with the AEHF, APS, Milstar, and UFO-E/EE	Interoperable with the AEHF, APS, Milstar, and UFO-E/EE	Simultaneous use of the legacy AFCPT with the FAB -T CPT in Milstar and AEHF networks was successfully conducted November 2014. Satellite control coexistence planned for mid-2015.	Interoperable with the AEHF, EPS and Milstar

Requirements Reference

Advanced Wideband Terminal (AWT) Operational Requirements Document (ORD) dated March 29, 2004 and Command Post Terminal (CPT) ORD dated March 12, 2002

Change Explanations

None

Notes

The following footnotes 1 through 10 apply to the above sections as listed:

Interoperability: 1 & 9
 Information Assurance: 2 & 9
 Survivability: 2 & 9
 AWT Legacy Milstar Support: 3 & 9
 AWT Nuclear Interoperability: 3 & 9
 AWT Security Protection: 3 & 9
 AWT Security Levels: 4 & 9
 AWT Force Direction/Reportback: 3 & 9
 CPT Control Interface: 5
 CPT Backwards Compatibility: 6
 CPT Existing Terminal Coexistence: 7
 CPT Satellite Constellation Coexistences: 8 & 10

Footnotes:

1. Threshold requirements (critical IERs) placed on contract; objective requirements (noncritical IERs) not proposed by contractor. This performance parameter applies to both the AWT and CPT configurations (AWT ORD March 29, 2004 and CPT ORD March 6, 2002).
2. This performance parameter applies to both AWT and CPT.
3. This performance parameter only applies to AWT configuration.
4. Threshold requirements (single level security) placed on contract; objective requirements (multi-level security) not proposed by contractor. This performance parameter only applies to the AWT configuration.

5. For FAB-T, access to privileged Tracking Telemetry and Control (TT&C) capabilities and resource controller capabilities is restricted through mission planning data sets and through dedicated COMSEC algorithms and associated keys. Terminal software shall assign privileges to ensure that only designated terminals at TT&C nodes will have TT&C capabilities and that only designated terminals at resource controller nodes will have resource controller capabilities. This performance parameter only applies to the CPT configuration.
6. The FAB-T interface to the Red Switch is via the Advanced Narrowband Digital Voice Terminal (ANDVT), and the interface to NPES is via SCIS. This performance parameter only applies to the CPT configuration.
7. FAB-T complies with the CPT interoperability requirements defined in the Terminal Segment Specification for the Milstar II Satellite Communications Program SR-2300 (excluding Digital Secure Voice Terminal (DSVT) KY-68, Asynchronous T1, Demand Assignment Multiple Access (DAMA) Limited Beam Management, LDR Full Beam Management of default agile locations, and Medium Data Rate (MDR) Capabilities) and Joint Terminal Segment Specification for the EHF Satellite Communications Program SR-3300. This performance parameter only applies to the CPT configuration.
8. Interoperability with UFO/E and UFO/EE is predicated on the development by the AEHF Program of the capability for the terminal to receive mission planning data and TRANSEC keys from the Mission Planning Element. FAB-T is not expected to produce or deploy the capability associated with Advanced Polar System satellite interoperability. Terminal modifications for Advanced Polar System satellites are not funded. This performance parameter only applies to the CPT configuration. Note: Advanced Polar System is now Enhanced Polar System.
9. The LDR System provided to the strategic forces must meet the following Performance parameters in Section A: Interoperability, Information Assurance, Survivability, AWT Legacy Milstar, AWT Nuclear Interoperability, AWT Security Protection, AWT Security Levels, and AWT Force Direction/Reportback. The Extended Data Rate (XDR) System must meet all the Performance parameters in Section A.
10. Extensive testing with on-orbit Milstar satellite has occurred; two LDR tests with the AEHF payload (prior to launch) have been completed; these AEHF satellites are now on-orbit and when available for testing we will conduct interoperability testing.

Acronyms and Abbreviations

AEHF - Advanced Extremely High Frequency
AF - Air Force
AFCPT - Air Force Command Post Terminal
AFRB - Air Force Report Back
AFSPC - Air Force Space Command
ANDVT - Advanced Narrowband Digital Voice Terminal
APS - Advanced Polar System
ASMCS - AEHF Satellite Mission Control Subsystem
AWT - Advanced Wideband Terminal
BC - Backward Compatible
C&A - Certification & Accreditation
COMSEC - Communications Security
CPT - Command Post Terminal
DAA - Designated Approving Authority
DAMA - Demand Assignment Multiple Access
DIACAP - DoD Information Assurance Certification & Accreditation Process
DIRECT - Defense IEMATS Replacement Command and Control Terminal
DITSCAP - Defense Information Technology Security Certification and Accreditation Process
DMU - Dual Modem Unit
DoDI - Department of Defense Instruction
EAM - Emergency Action Message
EHF - Extremely High Frequency
EPS - Enhanced Polar System
FAB-T - Family of Advanced Beyond Line-of-Sight Terminals
FDM - Force Direction Message
FE - Force Element
FMC - Fully Mission Capable
IA - Information Assurance
IATT - Interim Authority to Test
IAW - In Accordance With
IEMATS - Improved Emergency Message Automatic Transmission System
IER - Information Exchange Requirement
JCS - Joint Chief of Staff
LDR - Low Data Rate
MMPU - Minuteman MEECN Program Upgrade
MPSS - Mission Planning Support System
NAST-T - Networked AEHF Terminal Test Tool
NMT - Navy Multi-Band Terminal
NPES - Nuclear Planning and Execution System
NRB - Navy Report Back
NSA - National Security Agency
NSV - Nuclear Survivability and Vulnerability
PCMR - Probability of Correct Message Receipt
SCIS - Secure Communications Integrated System
STIG - Security Technical Implementation Guidance
TPO - Terminal Program Office
TRANSEC - Transmission Security
TS/SCI - Top Secret/Special Compartmented Information
UFO/E - UHF Follow On - EHF
UFO-E/EE - UHF Follow On - EHF/EHF Enhanced
UHF - Ultra High Frequency
w/o - without

Track to Budget

RDT&E

Appn	BA	PE		
Air Force	3600	07	0303001F	
	Project	Name		
	672490	Family of Adv Beyond Line of Sight Terminals (FAB-T)		
Air Force	3600	07	0303601F	
	Project	Name		
	672487	MILSATCOM Terminals	(Shared)	(Sunk)
	672489	FAB-T Alternative		(Sunk)
	672490	Family of Adv Beyond Line of Sight Terminals (FAB-T)		(Sunk)

Procurement

Appn	BA	PE		
Air Force	3010	06	0303001F	
	Line Item	Name		
	000999	Initial Spares/Repair Parts		
Air Force	3010	06	0303601F	
	Line Item	Name		
	000999	Initial Spares/Repair Parts	(Shared)	(Sunk)
Air Force	3010	05	0303601F	
	Line Item	Name		
	FBLOST	Family of Beyond Line-of-Sight Terminals		(Sunk)
Air Force	3010	05	0303001F	
	Line Item	Name		
	FBLOST	Family of Beyond Line-of-Sight Terminals		
Air Force	3010	05	0303601F	
	Line Item	Name		
	OTHACF	Other Aircraft	(Shared)	(Sunk)
Air Force	3080	03	0303001F	
	Line Item	Name		
	836700	Family of Beyond Line-of-Sight Terminals		
Air Force	3080	03	0303601F	
	Line Item	Name		
	836700	Family of Beyond Line-of-Sight Terminals		(Sunk)
	836780	MILSATCOM Space	(Shared)	(Sunk)
Air Force	3080	05	0303001F	
	Line Item	Name		

	861900	Spares and Repair Parts	
Air Force	3080 05	0303601F	
	Line Item	Name	
	861900	Spares and Repair Parts	(Shared) (Sunk)

Notes

FAB-T shares the Other Aircraft (OTHACF) line item with other modification programs. Procurement funding for six terminals for the President of the United States aircraft are included in OTHACF line item. Procurement funding for all other FAB-T airborne terminals are included in the Family of Beyond Line-of-Sight Terminals (FBLOST) line item. FAB-T shares the 000999 Initial Spares line item with other programs, and shares 836780 with other Military Satellite Communication (MILSATCOM) programs.

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2002 \$M			BY 2002 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	1273.8	1283.2	1411.5	2100.1 ¹	1431.1	1456.1	2494.6
Procurement	1368.5	1677.3	1845.0	1227.6	1736.3	2166.1	1770.1
Flyaway	--	--	--	849.7	--	--	1227.9
Recurring	--	--	--	849.7	--	--	1227.9
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	377.9	--	--	542.2
Other Support	--	--	--	83.4	--	--	118.5
Initial Spares	--	--	--	294.5	--	--	423.7
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	2642.3	2960.5	N/A	3327.7	3167.4	3622.2	4264.7

¹ APB Breach

Cost Notes

Distribution of procurement funds and quantities will be adjusted based on funding priorities and terminal schedules.

President of the United States terminal funding reduced FY 2016-FY 2019. FAB-T funding and quantities have been re-phased throughout the given FYs.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E	25	25	43
Procurement	191	197	216
Total	216	222	259

Quantity Notes

Total RDT&E Quantity includes 13 Engineering Development Models (EDMs) under the Raytheon contract and 30 EDMs under the Boeing contract.

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2016 President's Budget / December 2014 SAR (TY\$ M)									
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
RDT&E	2193.8	54.7	3.9	0.0	0.0	0.0	0.0	242.2	2494.6
Procurement	85.6	123.6	171.5	179.4	60.5	89.5	150.1	909.9	1770.1
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2016 Total	2279.4	178.3	175.4	179.4	60.5	89.5	150.1	1152.1	4264.7
PB 2015 Total	2279.4	186.9	239.9	210.0	191.8	166.8	456.3	1088.8	4819.9
Delta	0.0	-8.6	-64.5	-30.6	-131.3	-77.3	-306.2	63.3	-555.2

Quantity Summary										
FY 2016 President's Budget / December 2014 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Development	43	0	0	0	0	0	0	0	0	43
Production	0	10	17	22	35	0	0	0	132	216
PB 2016 Total	43	10	17	22	35	0	0	0	132	259
PB 2015 Total	37	4	9	14	10	10	7	36	132	259
Delta	6	6	8	8	25	-10	-7	-36	0	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
3600 RDT&E Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	5.3
2002	--	--	--	--	--	--	10.5
2003	--	--	--	--	--	--	51.8
2004	--	--	--	--	--	--	114.8
2005	--	--	--	--	--	--	173.1
2006	--	--	--	--	--	--	196.2
2007	--	--	--	--	--	--	193.0
2008	--	--	--	--	--	--	277.6
2009	--	--	--	--	--	--	210.2
2010	--	--	--	--	--	--	189.5
2011	--	--	--	--	--	--	263.9
2012	--	--	--	--	--	--	280.3
2013	--	--	--	--	--	--	97.8
2014	--	--	--	--	--	--	129.8
2015	--	--	--	--	--	--	54.7
2016	--	--	--	--	--	--	3.9
2017	--	--	--	--	--	--	--
2018	--	--	--	--	--	--	--
2019	--	--	--	--	--	--	--
2020	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	123.2
2022	--	--	--	--	--	--	106.6
2023	--	--	--	--	--	--	12.4
Subtotal	43	--	--	--	--	--	2494.6

Annual Funding							
3600 RDT&E Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2002 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	5.3
2002	--	--	--	--	--	--	10.4
2003	--	--	--	--	--	--	50.7
2004	--	--	--	--	--	--	109.7
2005	--	--	--	--	--	--	161.2
2006	--	--	--	--	--	--	177.4
2007	--	--	--	--	--	--	170.0
2008	--	--	--	--	--	--	239.7
2009	--	--	--	--	--	--	179.2
2010	--	--	--	--	--	--	159.5
2011	--	--	--	--	--	--	218.0
2012	--	--	--	--	--	--	227.6
2013	--	--	--	--	--	--	78.0
2014	--	--	--	--	--	--	102.0
2015	--	--	--	--	--	--	42.4
2016	--	--	--	--	--	--	3.0
2017	--	--	--	--	--	--	--
2018	--	--	--	--	--	--	--
2019	--	--	--	--	--	--	--
2020	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	85.3
2022	--	--	--	--	--	--	72.4
2023	--	--	--	--	--	--	8.3
Subtotal	43	--	--	--	--	--	2100.1

Annual Funding							
3010 Procurement Aircraft Procurement, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	4.3	--	--	4.3	--	4.3
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	1.3	--	--	1.3	--	1.3
2011	--	--	--	--	--	--	--
2012	--	3.8	--	--	3.8	--	3.8
2013	--	4.6	--	--	4.6	--	4.6
2014	--	1.9	--	--	1.9	--	1.9
2015	5	45.0	--	--	45.0	9.4	54.4
2016	6	32.3	--	--	32.3	15.2	47.5
2017	10	3.0	--	--	3.0	9.7	12.7
2018	--	3.2	--	--	3.2	9.7	12.9
2019	--	6.3	--	--	6.3	6.8	13.1
2020	--	18.1	--	--	18.1	1.3	19.4
2021	--	2.5	--	--	2.5	--	2.5
2022	34	170.4	--	--	170.4	61.0	231.4
2023	41	190.6	--	--	190.6	71.5	262.1
2024	41	197.9	--	--	197.9	71.5	269.4
2025	7	66.2	--	--	66.2	15.5	81.7
Subtotal	144	751.4	--	--	751.4	271.6	1023.0

Annual Funding 3010 Procurement Aircraft Procurement, Air Force							
Fiscal Year	Quantity	BY 2002 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	3.7	--	--	3.7	--	3.7
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	1.1	--	--	1.1	--	1.1
2011	--	--	--	--	--	--	--
2012	--	3.0	--	--	3.0	--	3.0
2013	--	3.6	--	--	3.6	--	3.6
2014	--	1.5	--	--	1.5	--	1.5
2015	5	34.0	--	--	34.0	7.1	41.1
2016	6	24.0	--	--	24.0	11.2	35.2
2017	10	2.2	--	--	2.2	7.0	9.2
2018	--	2.3	--	--	2.3	6.9	9.2
2019	--	4.4	--	--	4.4	4.8	9.2
2020	--	12.4	--	--	12.4	0.9	13.3
2021	--	1.7	--	--	1.7	--	1.7
2022	34	112.3	--	--	112.3	40.2	152.5
2023	41	123.1	--	--	123.1	46.2	169.3
2024	41	125.3	--	--	125.3	45.3	170.6
2025	7	41.1	--	--	41.1	9.6	50.7
Subtotal	144	495.7	--	--	495.7	179.2	674.9

Cost Quantity Information		
3010 Procurement Aircraft Procurement, Air Force		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2002 \$M
2007	--	--
2008	--	--
2009	--	--
2010	--	--
2011	--	--
2012	--	--
2013	--	--
2014	--	--
2015	5	17.2
2016	6	20.7
2017	10	34.5
2018	--	--
2019	--	--
2020	--	--
2021	--	--
2022	34	117.0
2023	41	141.1
2024	41	141.1
2025	7	24.1
Subtotal	144	495.7

Annual Funding 3080 Procurement Other Procurement, Air Force								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2010	--	1.9	--	--	1.9	--	1.9	
2011	--	--	--	--	--	--	--	
2012	--	--	--	--	--	--	--	
2013	--	5.0	--	--	5.0	--	5.0	
2014	10	60.4	--	--	60.4	2.4	62.8	
2015	12	57.0	--	--	57.0	12.2	69.2	
2016	16	67.7	--	--	67.7	56.3	124.0	
2017	25	119.1	--	--	119.1	47.6	166.7	
2018	--	14.9	--	--	14.9	32.7	47.6	
2019	--	18.8	--	--	18.8	57.6	76.4	
2020	--	79.9	--	--	79.9	50.8	130.7	
2021	--	5.2	--	--	5.2	--	5.2	
2022	--	--	--	--	--	--	--	
2023	5	27.3	--	--	27.3	6.0	33.3	
2024	4	19.3	--	--	19.3	5.0	24.3	
Subtotal	72	476.5	--	--	476.5	270.6	747.1	

Annual Funding 3080 Procurement Other Procurement, Air Force								
Fiscal Year	Quantity	BY 2002 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2010	--	1.6	--	--	1.6	--	1.6	
2011	--	--	--	--	--	--	--	
2012	--	--	--	--	--	--	--	
2013	--	4.0	--	--	4.0	--	4.0	
2014	10	47.6	--	--	47.6	1.9	49.5	
2015	12	44.3	--	--	44.3	9.4	53.7	
2016	16	51.7	--	--	51.7	43.0	94.7	
2017	25	89.3	--	--	89.3	35.7	125.0	
2018	--	11.0	--	--	11.0	24.0	35.0	
2019	--	13.6	--	--	13.6	41.5	55.1	
2020	--	56.5	--	--	56.5	35.9	92.4	
2021	--	3.6	--	--	3.6	--	3.6	
2022	--	--	--	--	--	--	--	
2023	5	18.2	--	--	18.2	4.0	22.2	
2024	4	12.6	--	--	12.6	3.3	15.9	
Subtotal	72	354.0	--	--	354.0	198.7	552.7	

Cost Quantity Information 3080 Procurement Other Procurement, Air Force		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2002 \$M
2010	--	--
2011	--	--
2012	--	--
2013	--	--
2014	10	49.2
2015	12	59.0
2016	16	78.7
2017	25	122.9
2018	--	--
2019	--	--
2020	--	--
2021	--	--
2022	--	--
2023	5	24.6
2024	4	19.6
Subtotal	72	354.0

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	7/5/2009	4/5/2012
Approved Quantity	101	24
Reference	Acquisition Strategy Production Phase Addendum	Acquisition Strategy Amendment
Start Year	2010	2014
End Year	2012	2015

The Current Total LRIP Quantity is more than 10% of the total production quantity due to schedule to meet FY 2019 IOC for Presidential & National Voice Conferencing capability.

The December 2011 SAR reported against the January 2009 Acquisition Strategy, which reflected a 3-year LRIP schedule and included Advanced Wideband Terminals to accomplish Initial Operational Test & Evaluation with LRIP assets. The April 2012 Acquisition Strategy reflects a 2-year LRIP schedule.

Foreign Military Sales

None

Nuclear Costs

None

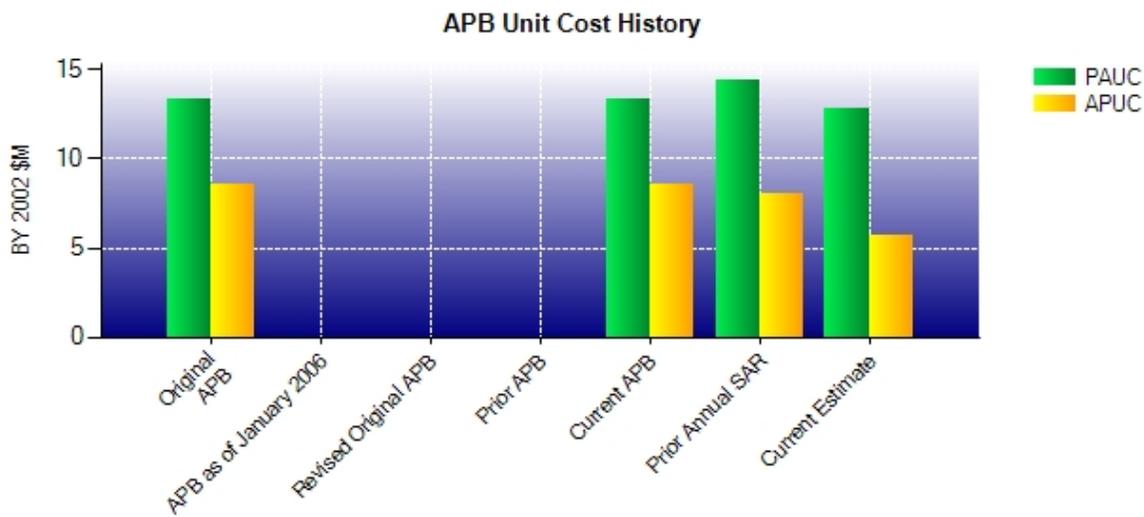
Unit Cost

Unit Cost Report

Item	BY 2002 \$M	BY 2002 \$M	% Change
	Current UCR Baseline (Dec 2007 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	2960.5	3327.7	
Quantity	222	259	
Item	13.336	12.848	-3.66
Average Procurement Unit Cost			
Cost	1677.3	1227.6	
Quantity	197	216	
Unit Cost	8.514	5.683	-33.25

Item	BY 2002 \$M	BY 2002 \$M	% Change
	Original UCR Baseline (Dec 2007 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	2960.5	3327.7	
Quantity	222	259	
Unit Cost	13.336	12.848	-3.66
Average Procurement Unit Cost			
Cost	1677.3	1227.6	
Quantity	197	216	
Unit Cost	8.514	5.683	-33.25

Unit Cost History



Item	Date	BY 2002 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Dec 2007	13.336	8.514	16.316	10.995
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	Dec 2007	13.336	8.514	16.316	10.995
Prior Annual SAR	Dec 2013	14.372	8.057	18.610	11.563
Current Estimate	Dec 2014	12.848	5.683	16.466	8.195

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
14.664	-0.024	-1.669	0.860	0.675	1.197	0.000	0.763	1.802	16.466

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
9.091	-0.071	-0.232	1.031	0.000	-2.539	0.000	0.915	-0.896	8.195

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	Feb 2010	N/A	Aug 2015
IOC	N/A	Jun 2013	N/A	Dec 2019
Total Cost (TY \$M)	N/A	3167.4	N/A	4264.7
Total Quantity	N/A	216	N/A	259
PAUC	N/A	14.664	N/A	16.466

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	1431.1	1736.3	--	3167.4
Previous Changes				
Economic	+10.2	+9.6	--	+19.8
Quantity	+21.0	+229.0	--	+250.0
Schedule	--	+229.0	--	+229.0
Engineering	+174.7	--	--	+174.7
Estimating	+615.9	+124.8	--	+740.7
Other	--	--	--	--
Support	--	+238.3	--	+238.3
Subtotal	+821.8	+830.7	--	+1652.5
Current Changes				
Economic	-0.9	-25.0	--	-25.9
Quantity	--	-51.7	--	-51.7
Schedule	--	-6.3	--	-6.3
Engineering	--	--	--	--
Estimating	+242.6	-673.2	--	-430.6
Other	--	--	--	--
Support	--	-40.7	--	-40.7
Subtotal	+241.7	-796.9	--	-555.2
Total Changes	+1063.5	+33.8	--	+1097.3
CE - Cost Variance	2494.6	1770.1	--	4264.7
CE - Cost & Funding	2494.6	1770.1	--	4264.7

Summary BY 2002 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	1273.8	1368.5	--	2642.3
Previous Changes				
Economic	--	--	--	--
Quantity	+17.5	+166.9	--	+184.4
Schedule	--	+0.6	--	+0.6
Engineering	+145.8	--	--	+145.8
Estimating	+496.7	+109.2	--	+605.9
Other	--	--	--	--
Support	--	+143.4	--	+143.4
Subtotal	+660.0	+420.1	--	+1080.1
Current Changes				
Economic	--	--	--	--
Quantity	--	-33.4	--	-33.4
Schedule	--	-0.3	--	-0.3
Engineering	--	--	--	--
Estimating	+166.3	-491.1	--	-324.8
Other	--	--	--	--
Support	--	-36.2	--	-36.2
Subtotal	+166.3	-561.0	--	-394.7
Total Changes	+826.3	-140.9	--	+685.4
CE - Cost Variance	2100.1	1227.6	--	3327.7
CE - Cost & Funding	2100.1	1227.6	--	3327.7

Previous Estimate: September 2014

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.9
Revised estimate for Force Element Terminal (FET) Development beyond the FYDP. (Estimating)	+165.7	+241.8
Adjustment for current and prior escalation. (Estimating)	+0.6	+0.8
RDT&E Subtotal	+166.3	+241.7

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-25.0
Reduced total airborne terminals from 150 to 144 based on transfer out of President of the United States (POTUS) funding to procure 6 terminals for Presidential aircraft (Appn 3010). (Subtotal)	-33.8	-52.3
Reduced total airborne terminals from 150 to 144 based on transfer out of POTUS funding to procure 6 terminals for Presidential aircraft (Appn 3010). (Quantity)	(-33.4)	(-51.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.3)	(-0.5)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.1)	(-0.1)
Revised estimate for Command Post Terminal (CPT) Production decision and contract award. (Subtotal)	-440.6	-600.8
Reduced cost estimate for airborne terminals based on fixed contractor pricing (Appn 3010). (Estimating)	(-46.8)	(-56.6)
Reduced cost estimate for ground terminals based on fixed contractor pricing (Appn 3080). (Estimating)	(-341.1)	(-457.2)
Rephasing of procurement buy profile based on CPT Production contract award. (Schedule)	(0.0)	(-20.1)
Revised estimate for CPT Spares based on fixed price contractor pricing (3010 Appn). (Support)	(-14.7)	(-17.8)
Revised estimate for logistics support based on CPT contract award (3080 Appn). (Support)	(-43.9)	(-57.3)
Revised estimate for CPT Spares based fixed price contractor pricing (3080 Appn). (Support)	(+5.9)	(+8.2)
Revised estimate for FET Procurement beyond the FYDP. (Subtotal)	-44.1	-60.0
Revised estimate for FET cost. (Estimating)	(-60.5)	(-100.2)
Rephasing of procurement buy profile for FETs beyond the FYDP. (Schedule)	(0.0)	(+14.3)
Increased estimate for FET Interim Contractor Support, Training and Depot Startup based on separate acquisition beyond the FYDP (3010 Appn). (Support)	(+16.4)	(+25.9)
Decrease in funding based on transfer of POTUS funds (Appn 3010). (Estimating)	-43.4	-60.0
Adjustment for current and prior escalation. (Estimating)	+0.8	+0.9
Adjustment for current and prior escalation. (Support)	+0.1	+0.3
Procurement Subtotal	-561.0	-796.9

(QR) Quantity Related

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: FAB-T CPT Development
Contractor: Raytheon
Contractor Location: 1001 Boston Post Road E
 Marlborough, MA 01752-2377
Contract Number: FA8307-12-C-0013
Contract Type: Firm Fixed Price (FFP), Fixed Price Incentive(Firm Target) (FPIF)
Award Date: September 07, 2012
Definitization Date: April 10, 2013

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
70.0	70.0	N/A	215.3	215.3	13	215.3	215.3

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to definitization and exercise of additional contract options.

Contract Variance			
Item	Cost Variance		Schedule Variance
Cumulative Variances To Date	0.0		0.0
Previous Cumulative Variances	--		--
Net Change	+0.0		+0.0

Cost and Schedule Variance Explanations

None

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because a waiver from DFARS 252.234-7001 and 252.234-7702 was granted due to the short duration of the FPIF CLINs on the contract. The FPIF effort consisted of three serially awarded CLINs (initial 10-month award and two 2-month contract options); therefore, timely EVM implementation was deemed to be impractical.

Notes

Thirteen EDMs will be produced under the contract; six will be delivered to the Government and seven will be retained by the contractor for testing purposes.

Contract Identification

Appropriation: Procurement
Contract Name: FAB-T CPT Production
Contractor: Raytheon
Contractor Location: 1001 Boston Post Road East
 Marlborough, MA 01752-2377
Contract Number: FA8705-13-C-0005
Contract Type: Firm Fixed Price (FFP)
Award Date: September 23, 2013
Definitization Date: June 02, 2014

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
298.5	N/A	84	298.5	N/A	84	298.5	298.5

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	32	32	43	74.42%
Production	0	0	216	0.00%
Total Program Quantity Delivered	32	32	259	12.36%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	4264.7	Years Appropriated	15
Expended to Date	2089.4	Percent Years Appropriated	60.00%
Percent Expended	48.99%	Appropriated to Date	2457.7
Total Funding Years	25	Percent Appropriated	57.63%

The above data is current as of January 31, 2015.

Total Quantity for Development includes thirteen Raytheon Engineering Development Models. Planned/Actual to Date reflect 30 deliveries under the Boeing contract and two under the Raytheon contract.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	January 23, 2009
Source of Estimate:	CAPE ICE
Quantity to Sustain:	216
Unit of Measure:	Terminal
Service Life per Unit:	20.00 Years
Fiscal Years in Service:	FY 2014 - FY 2039

At the time of the 2009 Independent Cost Estimate (ICE), FAB-T consisted of 216 ground and airborne terminals with an assumed 20-year life per terminal after installation. The 43 RDT&E Engineering Development Models will not be sustained by the FAB-T Program Office. Interim Contractor Support (ICS) costs are included in the Production contract and are not included in the O&S Cost. O&S costs include Unit Operations and Sustaining Support. Sustaining Support costs consist of sustaining engineering and software maintenance, which includes correction of deficiencies.

These estimates are based on pre-down-select information. Actual post-down-select estimates are expected to be significantly less. A more accurate cost estimate will be provided with the updated ICE to support Milestone C.

Sustainment Strategy

The product support strategy is structured to optimize customer support and system availability, minimize ownership costs and logistics footprint, and make the best use of public and private sector capabilities. The FAB-T maintenance concept employs two levels of support: Organizational Level Maintenance (O-Level) and Depot Level (D-Level). O-Level support will be provided by organic O&M personnel upon successful installation and government acceptance of the first LRIP terminal. They will be supported with initial spares, support equipment and training. Since the Ground Fixed Command Post Terminals (CPTs) will replace existing Milstar terminals in existing fixed facilities, no new facilities are required. Additionally, FAB-T does not require the creation of a new Air Force Specialty Code (AFSC) for O&M. The production contract includes four consecutive twelve month options for D-Level ICS and continues until the transition to organic depot level support or a combination of public and private support. The FAB-T technical data rights strategy is structured to support full organic and/or competitive contractor logistics support in the future with specifications, software documents, system drawings, and other engineering data to facilitate future competition for sustainment.

Antecedent Information

FAB-T consists of CPTs and Advanced Wideband Terminals. For CPTs, FAB-T is a replacement terminal for the existing Milstar CPTs at ground (fixed and mobile) sites and E-4 and E-6 airborne platforms. There are no Milstar terminals to be replaced in the B-52, B-2, and RC-135 aircraft. There are 82 Milstar terminals, each with an expected service life of 18 years. Antecedent Costs were not normalized to reflect operational/capability differences between the FAB-T and Milstar terminals.

The antecedent Milstar CPT program office estimate is from April 2003 finalized in Air Force Space Command's budget request to Headquarters Air Force.

Annual O&S Costs BY2002 \$K		
Cost Element	FAB-T Average Annual Cost Per Terminal	MILSTAR CPT (Antecedent) Average Annual Cost Per Terminal
Unit-Level Manpower	0.000	0.000
Unit Operations	903.972	178.000
Maintenance	0.000	0.000
Sustaining Support	95.565	132.000
Continuing System Improvements	0.000	0.000
Indirect Support	0.000	0.000
Other	0.000	0.000
Total	999.537	310.000

Item	Total O&S Cost \$M			
	FAB-T		MILSTAR CPT (Antecedent)	
	Current Development APB Objective/Threshold	Current Estimate		
Base Year	N/A	N/A	4318.1	0.0
Then Year	N/A	N/A	7181.0	N/A

Equation to Translate Annual Cost to Total Cost

Total O&S Cost = service life per system * number of systems * unitized cost

Total O&S Cost = 20 years per terminal * 216 terminals * \$999.537K

O&S Cost Variance		
Category	BY 2002 \$M	Change Explanations
Prior SAR Total O&S Estimates - Sep 2014 SAR	4318.1	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	0.0	
Current Estimate	4318.1	

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2002 \$M):

At the time of the O&S cost estimate, disposal costs were not included, but they will be updated for Milestone C.